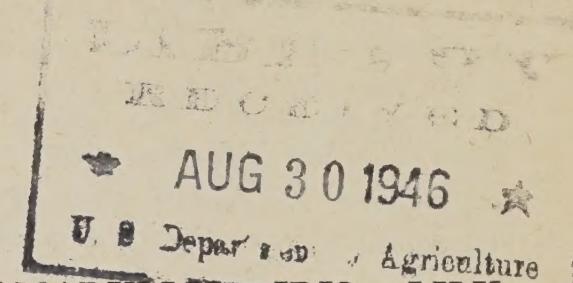


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

BULBS FOR POTS

AND FALL PLANTING IN THE GARDEN



A CATALOG OF BULBS OF THE AMARYLLIS, IRIS, LILY,
ORCHID, OXALIS AND OTHER PLANT FAMILIES

Special Articles: Springtime in Holland, p. 2. How to grow and force Hyacinths and a human interest story, p. 25. How to grow or force Daffodils and all bulbs listed. Discussions of soils, fertilizers and pests.

FALL 1946

1 CENT

CECIL HOUDYSHEL

1412 THIRD ST.

LA VERNE, CALIFORNIA

If not interested Please Return to
Postmaster, marked "Refused."

Librarian
U. S. Dept. of Agriculture
Washington, 25, D.C.

Return Postage Guaranteed

Sec. 562, P. L. & R.

SPRINGTIME IN HOLLAND

A PERSONAL LETTER — TO YOU —

Dear Floral Friends,

During the war, when Europe was enveloped in an impenetrable cloud of mystery, doubt and fear, one of our deepest concerns was for Holland. Would the people and their fields of bulbs survive? It is said that Mohammed called Hyacinths "food for the soul." We believe that all flowers are food for the soul equally with music, painting and other arts.

Flowers are one of Holland's outstanding contributions to society. They are no less important than literature or art and Holland has excelled also in these. We hoped that Holland's flowers would survive just as we hoped that old cathedrals and other examples of ancient, medieval and modern architecture in Rome, Paris, London and elsewhere would be preserved.

We know now that in those dark days, the Dutch did not lose courage. Hungry, cold and emaciated men toiled a few hours each day. Often they had only Tulips and Spinach to eat. There was never even one-half enough. But there continued to be the springtime blossoming of Hyacinths, Amaryllis, Tulips and their many other bulbs. I am sure this gave them courage and strength of soul and added to their spiritual faith. These were needed to sustain their waning physical strength.

With the return of peace, Dutch soldiers again tilling the soil; food, clothing, gas and electricity again available, their bulbs are now in an excellent state of culture.

Springtime in Holland is no longer tempered by war and famine. The perfume of flowers fills the air. Their beauty meets the eye in every direction. Fields of Hyacinths, Tulips and Daffodils are like giant striped rugs spread upon the ground.

During recent weeks and months many air mail letters passed between us and the best Holland growers. As a result, we are able to offer you opportunity in this catalog to have a small replica of Springtime in Holland in your own garden and even in your kitchen and living room windows or in your small greenhouse you may enjoy the beauty and fragrance of their spring flowering bulbs.

From Holland we will receive the newest and best Hyacinths. Some of them I have never seen because they are very new and I too will have them in my greenhouse and garden for the first time. There is a "human interest" story in connection with the Hyacinths on p. 25 which I hope you will read.

Dutch Amaryllis belong to the Aristocracy among bulbs. They were my largest importation, in cost. Considering their high quality they are most reasonably priced, lower in fact than before the war. Every Amaryllis lover should own one or an entire set of six varieties, which I offer in a collection. These are listed on p. 12. Since the color tones vary, one would get few duplicates in the purchase of several collections.

Other imported bulbs are offered together with American grown Freesias, Ranunculus, Daffodils, Gladiolus, etc. Many are grown on our Rancho de las Flores.

All thru the following pages, I have listed the highest quality of bulbs and the best sorts I can grow and buy because I want for myself and for my customers the very best. I have told you in many special articles how to handle your soils and how to grow all the bulbs listed. I am listing several new books and offering products for pest control.

Even as I want it for myself, I want you to have a replica of "Springtime in Holland."

Sincerely,

Cecil Houdyshel

TERMS AND INSTRUCTIONS FOR ORDERING

Read the following carefully. It will avoid delay or misunderstanding.

Sales Tax. California customers must add $2\frac{1}{2}\%$ for state sales tax.

Remit with order by check or M. O. Currency or coins are acceptable but we are not responsible if lost. Stamps reluctantly accepted at 8% discount. **Please do not ask for credit.**

C. O. D. We do not ship C. O. D.

Postage prepaid on orders of \$1.00 or over. Under \$1.00 add 10c extra.

Insurance. Customers are urged to insure every order. We have had orders go astray in a distance of 30 miles. We have never lost one insured package. Costs little. Send 3c extra for values to \$5.00; 10c for values \$5.00 to \$25.00. Insure your order and it will receive more careful attention. We accept no responsibility for uninsured packages.

Express is much safer and is advised for large or valuable shipments especially in very cold weather in north. But it is usually a little more expensive and we ship by express only at your expense. We add extra bulbs on express shipments, equal to postage.

Prices given are for one bulb unless otherwise stated. A dozen costs ten times the price of one. Six bulbs are sold at the dozen rate. If not otherwise priced, 100 bulbs are sold for the price of 7 doz., or 70 times the cost of one. Not less than 100 are sold at 100 rate. 50 are sold for the price of 4 doz.

Wholesale. Lack of labor has prevented us from digging enough of our bulbs to supply many at wholesale or to give discounts to dealers. We are therefore unable to publish a Wholesale Bulletin. Our quantity, prepaid prices are lower than some published wholesale prices. We will quote on a want list.

Foreign Orders. Postage is prepaid if no greater than to our 8th zone. Best to remit a little extra. If too much we send extra bulbs. We cannot accept orders for bulbs at the 100 rate to be shipped abroad postpaid. **Canadian Customers.** The \$5.00 limit on bulb importations has now been removed. Apply to the Sec. of Destructive Insect and Pest Act Advisory Board, Ottawa, Ont., for Permit and mailing label and send these with your order.

Errors. Our packers make a few, not many. We want to correct them. Notify us at once in case of shortage or error. Unpack your order as soon as received.

Partial Shipments. If all bulbs ordered are not included in the first package received, a colored slip informing you will be enclosed. Do not discard this with packing material. Pay attention and avoid correspondence for both of us.

Substitution. If out of a variety, we usually substitute one as near like it as possible, as good or better and of equal or greater value. If you do not approve this, say, "no substitution."

Guarantee. Our bulbs are true to name, and healthy. We do not, however, accept any responsibility for their performance after planting since we cannot control the conditions of their growth. If, in your opinion, our bulbs are not up to our specifications, please notify us at once when you receive them. But do not return them until we explain. If they are then unsatisfactory, you may return them.

Culture Directions are not sent with bulbs as all necessary information is given in this catalog.

Catalogs. Spring Catalog is mailed Jan. 15. Fall Catalog Aug. 15. If no orders are received for two years, names are dropped from our mailing lists. If you are no longer interested, ask your postmaster to return this catalog at our expense.

Correspondence. We enjoy and appreciate the friendly letters we receive. We answer these twice a year in our **Introductory Letter**. I regret that I am unable to write individually to each. On some days in the busy season our first class mail will go over 250 pieces. At this time we must use our too small office force for packing bulbs.

We receive many requests for information about growing bulbs. This catalog is

written to furnish that as well as to list the bulbs. Most inquirers show that the writer did not read the catalog as the very information asked for is in it.

We publish over 70,000 catalogs per year. The volume of correspondence has become greater than is possible for me to take care of. If you are obliged to ask a question enclose a self addressed post card for reply.

Identifying Bulbs. We can usually identify bulbs. Send flower, foliage and if possible, a bulb. Give all the facts known. Enclose self addressed post card. We do not undertake to identify horticultural varieties of Gladiolus, Iris, etc.

Time of Delivery. We deliver all bulbs within the correct range of time for planting or before.

Not all bulbs are ready to ship out on Sept. 1. We dig Gladiolus from Aug. to Oct.; Callas late Oct.; Amaryllis about Nov. 15. Items in the catalog that are not ready to ship in Sept. are noted in the catalog and delivery date is given.

GENERAL CULTURE DIRECTIONS

The best bulb soil is a rich sandy loam. Only a few, like Bearded Iris, prefer heavy soil. But nearly all bulbs do well in heavy soil, especially if plenty of humus is added.

All soils require the addition of large amounts of humus. You should compost all weeds, leaves and small branches. If possible, add manure to this and when well rotted and fine turn under and thoroly mix with the soil.

Fertilizers. Animal manures are the best. Use them with compost as explained. Do not use fresh manure except as a light mulch for certain growing plants and experiment on a few first as too much quickly destroys a plant. Do not add fresh manure or commercial fertilizer to soil just before planting bulbs or seeds. It would be as logical to give a day-old baby a tough steak, a piece of apple pie and two cups of coffee. Fertilize only healthy, thrifty plants. What would you think of a doctor who ordered a big meal for a sick man as a means of recovery? Do not fertilize when the ground is dry and plants need water.

After Blooming, many persons neglect their bulbs. A Gladiolus must grow and fatten at least two months after flowering. Amaryllis should grow with luxuriant foliage until late November or longer if it does not begin to yellow.

Let us consider the annual growth cycle of a bulb.

A dormant bulb contains a flower bud and short new leaves. There is food stored in the form of starches, etc., and also enzymes for digesting this food. While dormant, the stored up starches are turned into soluble sugar. Roots, buds and foliage begin to develop in their natural order and your care is rewarded. When thru flowering, the bulb has become smaller and is soft instead of firm and plump. This is a critical time. The bulb may appear at a pause for a short time but when a good root system has developed it will begin active growth. Encourage that. Give them food and water. Enough, not too much. The longer you can keep it growing, the larger and better will be your resulting bulb for next year. The yellowing of foliage will signify the bulb has reached full development.

Depth and Spacing often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. In a general way, bulbs should be about two or three times their diameter apart. Small bulbs like Ranunculus No. 3 may be covered 1"; bulbs the size of a Daffodil covered 4" to 6". Bulbs with a heavy top need deeper planting to maintain an erect position. Planting in light sandy soils should be deeper than in heavy soils. In very cold climates, deep planting protects bulbs from damage from frost. Few bulbs are too finicky about their depth and many of them have the ability to correctly adjust themselves to the most favorable depth if left in one place a few years.

Pests. The depredations of garden pests are too well known to require discussion except regarding remedies. In many localities, **snails and slugs** are so numerous that

control measures must be used. We have found the very best, **Bug-geta Pellets**. They save time and back bending work. They also kill cut worms and grasshoppers. Best and cheapest to buy 25 lbs. Price \$3.75 f.o.b. La Verne. **Ants** are a pest in the house and in the garden. They distribute such pests as *Aphis* and *Mealy* bug and tend them like domestic animals. Use **Ant-B-Gon**. Set of 4 dispensers, filled, 60c. Postage extra. Ask your P. M. the cost of postage on 2 lbs. from La Verne. **Ant-B-Gon**, liquid for refilling, 4 oz. 25c postpaid. **Mealy bugs** do much damage to garden and house plants. Use **Volc Oil Spray** in any type of sprayer. Fly sprayer will do for small jobs. Use this spray also for **scale insects**. 4 oz., 30c post paid. These remedies are the ones we use ourselves and by long experience have found most effective.

Alibis. Many amateur growers refuse to accept responsibility for their failures when they result. They blame the bulbs, but not themselves, the weather, their soil or pests. Therefore they do not learn from the best teacher, experience. Luther Burbank said, "A failure is an accomplishment." It is, if you learned by it.

ACID AND ALKALINE SOILS

Most plants thrive in neutral, mildly acid or mildly alkaline soils, but some will thrive only in distinctly acid soils. In the latter class are included Rhododenrons, Callas and most shade loving plants.

The acid-alkali balance is expressed in pH units. pH 7 is neutral. Below that the acidity increases; above it the alkalinity increases.

Soiltex Outfit. This little testing kit will enable you to determine the pH of your soil. No chemical knowledge is required. Directions for use are included with lists of plants and their preferred pH. Price \$1.00 postpaid.

If soils are too alkaline or if plants to be grown in them require more acidity, the best remedy is to incorporate much humus. Also improve the drainage, as lack of good drainage increases alkalinity. Peat is most acid usually, though some American peat has become alkaline. Oak leaf mould is more acid than other leaf moulds. Use much leaf mould or peat (preferably imported) for Gladiolus, Callas, Arums, Lilies, Haemanthus, Nerines, Orchids and all plants that require acid soil. It is best to buy peat locally on account of the high cost of transportation. But be sure it is imported Canadian peat with acid reaction. It should be pH 2.5 to 4. Test the peat offered you with Soiltex and don't buy poultry peat.

Canadian Peat. The most acid now obtainable. We can furnish this to local or near by customers who call for it at \$5.00 per bale. 10 lbs. for \$1.00. Or we will ship by express, f.o.b. for that price. Ask your express agent the cost before ordering as these bales weighed when we received them over 100 lbs.

Rootone. We know of really remarkable results from the use of Rootone, a plant hormone powder that induces quicker rooting of cuttings and bulbs and sprouting of seed. As a result of its action, bulbs make a more vigorous root system quickly and thus the flowers are earlier and larger; the foliage stronger and when dormant the bulbs will be found to be larger and with greater increase in number. We suggest you touch the base of a bulb to the powder until covered by a thin film. Or you can apply it with a soft brush or from a salt shaker after bulbs are set. Dip the end of cuttings into the powder. Tumble the seeds in a jar or in the seed envelope with the powder. When the seeds are coated, roll them out and save remaining powder.

Price. One-half ounce is a good supply. Mailed, postpaid for 50c. Use directions above. We can supply in 1-lb. cans (for extensive plantings) at \$5.00.

Vitamin B-1 is a useful stimulant for plants, we believe. We have soaked the roots of Amaryllis in flower in the solution, when transplanting and the flower was uninjured, lasted for days and seeds were ripened. We have used it successfully with other plants in transplanting. Price, bottle of 100 tablets, 75c.

Directions for use, applying only to our own tablets. In transplanting bulbs or any plants, loose roots, dissolve 5 tablets in 1 gal. water. Soak roots in this 15 to 30 min. Pour solution around plant when set.

To stimulate growing plants, for the first application dissolve 1 tab. in 2 gal. water. For succeeding waterings, use 1 tab. to 4 gal. of water once a week.

Warning. Do not soak dormant bulbs in Vit. B-1. It rots them.

Information Please. I am always seeking for more and recommend that you do the same. That is why I belong to **The American Plant Life Society**, (see under Amaryllidaceae) and **The American Horticultural Society**. The latter society publishes the American Horticultural Magazine, four large copies on heavy book paper, per year, which members receive. The topics covered are the entire field, not merely bulbs. The annual dues are \$3.00 per year which you may send to me if you wish.

You should join a local Garden Club, and subscribe for **Flower Grower**, Albany, N. Y. Send direct to them, \$2.50 per year. Two years for \$4.00.

Bailey's Cyclopedias of Horticulture. This 3-vol. set of over 3,600 large pages describes almost every cultivated plant. A wealth of culture information is also included. For \$25.00 we will send the complete set, postpaid. Sales tax in Calif. 63c.

Hortus Second (Bailey). A Concise Dictionary of Gardening and General Horticulture. This large 778 page volume lists nearly all plants offered in catalogs. There are fewer culture hints than in the Cyclopedias but we use and recommend both. Price, \$5.00 postpaid. Sales Tax 13c to Calif. customers.

A Southern Garden, a handbook for the Middle South. By Elizabeth Lawrence. A most useful book for all southern gardeners especially, and even those in the north can benefit by reading it. About bulbs and all garden plants. 251 pages. Price, \$3.00.

Enjoy Your House Plants. An excellent handbook of Window Gardening, by Dorothy Jenkins and Helen Van Pelt Wilson. Illustrated. 238 pages. Price, \$2.50.

Begonias, And How To Grow Them. By Bessie Raymond Buxton. An invaluable hand book for those who grow Begonias including the Tuberous Rooted. 161 pages. Illustrated. Price, \$2.25.

All the books above are nicely bound and printed on the best book paper. We recommend them and will mail them post paid on receipt of price, plus sales tax if to California. Start a garden library. Good bulbs and plants alone do not insure success. One must learn, study and experiment intelligently.

BULBS AS POT PLANTS

Bulbs are the most desirable of pot plants and may be easily forced in the living room, kitchen, or small greenhouse. Their response is much more rapid than that of a recently potted non-bulbous plant because of their storehouse of food and energy in the bulb. The reward is often an outstanding flower in a few weeks.

The proper time to pot will usually be given under the listing. It is very important to pot at once the following: Brunsvigia, Haemanthus coccineus, Amaryllis advena, Lycoris radiata, Sternbergia or others that bloom very early in fall. Pot soon the Arum Palaestinum, Veltheimia, Lachenalia, Nerines and Oxalis. White Callas, Freesias, Sparaxis, Tritonias, Babianas, and those that flower from mid-winter on, may be planted from Oct. 1 to Dec. 15. Colored Callas may be potted as early as Dec. 15 if watered only lightly until well started. They start easiest about Feb. 15 and are less likely to rot from too much water before growth starts. Amaryllis hybrids and most Amaryllis species may be potted from Dec. 1 to Apr. 1 but the early date is preferable.

The Elisena, Agapanthus mooreanus minor, A. pendulus, are sent as soon as dormant as all are deciduous. They do not usually start before about Feb. and should be watered very little until growth starts. Don't water Elisena before Feb. 1 and keep it in a very warm room, as this will make it start more easily and more sure to flower early. 70° to 80° is not too warm. Amaryllis, Agapanthus, and Elisena like a warm room when growing but most of the others need a cool room.

Clivias are among the most gorgeous of pot plants. I would place only Amaryllis and Orchids as more desirable. They need a cool room and not too much water in winter. Cymbidium Orchids are gorgeous pot plants. They should be potted in $\frac{3}{4}$ peat

and $\frac{1}{4}$ sandy loam or nearly pure sand. Half and half will do. Leaf mould may be used instead of peat. Light watering but frequent. They must not become dry nor soggy.

Billbergias make nice pot plants with attractive foliage. Water sparingly in winter unless flowering. **B. nutans** has a lovely flower in Feb.

The following can be moved or potted at any time: **Amarcrinum Howardii**, **Sprekelia formosissima superba**, **Tulbaghia violaceae**, **Clivia**, **Cymbidium**.

Haemanthus Katherinae, one of nature's masterpieces, is a gorgeous pot plant. This bulb is almost evergreen and has only a very short season for moving and repotting, usually late Jan. to Feb. but not always same date. Use regular potting soil with peat added and a 12" to 15" pot. (This bulb will be listed in Spring Catalog.)

I have mentioned only the most outstanding bulbs for potting here. Dutch Iris, **Allium triquetrum**, **Brodiaea uniflora** and many other bulbs listed in this catalog are also desirable for potting. For that matter one can grow about anything in a pot of appropriate size.

Potting Directions

The pot for a 2 $\frac{1}{2}$ " Amaryllis bulb should be about 7" diam. This is about right for most bulbs of that size. Give larger or smaller bulbs, pots proportionate in size. Small bulbs like Freesias, Babianas, Tritonias, Sparaxis, etc., if about $\frac{1}{2}$ " diam. may be planted 2" apart in pots up to 6" diam. Large sizes of these that are near 1" diam. ought to be 3" apart.

It is most important that drainage be perfect and the soil of a friable texture that allows water to drain perfectly. Cover the hole in the bottom of pot with reversed bits of broken pots and on top of that small pebbles, then coarse sand will help. An imperfectly drained soil often causes bulbs to rot before starting and if they start they do not grow and flower well. Yellow tipped leaves often indicate poor drainage. The pots should be cleaned and scalded.

The proper soil is a rich sandy loam with the addition of thoroly rotted leaf mould. Add peat or oak-leaf mould for acid loving plants. Use no fresh manure or other fertilizer at planting. Be very discreet even in using very old rotted manure. Rotted dairy manure is rather safe. A heaping tablespoonful of bone meal is good. Thoroly mix all ingredients.

Most small bulbs should be planted just under soil surface.

An Amaryllis and most large bulbs may have $\frac{2}{3}$ of bulb above surface. When placed, the soil may be settled by a thoro watering, once. After that no more water is usually needed until after growth begins, altho the soil should not become quite dry at base of bulb. A wet condition very long often rots a dormant bulb before they start, or later. The soil surface may appear dry and yet be too wet for starting bulbs at center of pot.

Most bulbs should have a cool room, about 60°, and some of them less, while rooting. When a bud or foliage gives evidence that growth has started, bring the pot to living room temperature of about 70° and water slightly. It is not time to water them freely yet. Do that only when flowering or in full growth. Do not overwater at any time. Sufficient time between waterings must be given to allow water to drain away, evaporate or be absorbed by roots so that air penetrates and bathes the entire root system. This is very necessary to plants and the roots need not be actually dry to permit it. They must not be water logged nor should they become dry. When in full growth and bloom, feed the bulbs about every 2 or 3 weeks with very weak liquid manure. It should be only amber tinted, the color of weak tea. Do not give liquid manure to a plant that is in nearly dry soil. Neither plants nor animals should be fed when thirsty. Proper feeding will result in luxuriant growth. Too much yellows the leaves, because the root hairs are burned off.

It is very important to continue watering and feeding after bulbs are thru

flowering. At that time they are rebuilding lost tissues, increasing in size, making offsets and finally constructing new buds for next season. At this time they will also store up food to support the early growth the next year. This is where most amateurs fail in getting results the following year. Some even write and ask me if they should cut off the foliage and dry up the bulbs at once, after flowering. Plants are living beings. They feed, drink, breathe, grow, react to light and heat and die the same as you, if not permitted to follow nature's way. If they do not succeed, very many blame the bulbs. You will succeed with intelligent care. Blame yourself or the conditions of growth when you have an occasional failure and you will thus learn. There is an element of chance in growing anything, but it is reducible. That makes it interesting. Match your skill against all unfavorable possibilities and learn to overcome them. That is your life problem also. There is a cause for everything. Find it.

ARRANGEMENT OF THIS CATALOG

is by Plant Families, not alphabetically. We also try to group more closely related plants together. Customers approve this plan because of increased information made possible.

In the following lists, the *genus* (plu. *genera*) is mentioned first. After it, the *species* (plu. also *species*) or horticultural variety is named. Thus we list *Amaryllis ambigua* or *Amaryllis* "Sibyl Houdyshel," tho it is more botanically correct to say *A. hybrida*, var. *Sibyl Houdyshel*. For the sake of brevity we shorten this. Please note the initial of the *genus* is used for the second and succeeding species. Thus, the initial *A.* may mean *Amaryllis*, *Alstromeria* or *Agapanthus* according to the *species* listed just preceding.

THE AMARYLLIS FAMILY—*Amaryllidaceae*

This family includes the bulbs from *Agapanthus* and thru *The Alliae*.

The American Plant Life Society. Those who grow *Amaryllis* and other bulbs of this family, not only for their beauty but as an interesting and intellectual hobby will be interested in joining the **American Plant Life Society**. This society, founded in 1934 as the American *Amaryllis* Society, has recently enlarged their interests and activities to include other bulbs and plants and the name "Plant Life" has been substituted for "Amaryllis," but with no lessening in interest in *Amaryllis*.

The Annual Book, "Herbertia," is devoted to *Amaryllidaceae*. This book is about 250 pages, beautifully illustrated with cuts of *Amaryllids*, is sent to each member. It is the essential reference book on *Amaryllids*, with articles in both scientific and popular style.

I invite you to become a member by sending me \$2.50 for your annual dues. This will entitle you to vol. 12, *Herbertia*. This is the 1945 year book, one year late. An additional \$2.50 will entitle you to the 1946 book, vol. 13. We hope this will be printed during this year. It is not difficult to understand that the war and the shortages of labor and paper have interrupted schedules.

The editor of *Herbertia* is Dr. Hamilton P. Traub, of the U. S. Dept. of Agriculture. He is no doubt the greatest living authority on the *Amaryllidaceae*. His work and that of the secretary and other officials as well as all contributors to *Herbertia* are entirely gratuitous. This listing in my catalog is a contribution. You receive *Herbertia* and *Plant Life Separata* as published at the actual cost of printing and mailing.

The *Plant Life Separata* will also be sent to members as issued. Their scope will embrace all plants of interest to gardeners. Dr. Traub will also edit *Plant Life* and as he is an outstanding taxonomist, we are expecting some classifications and descriptions of other plants than *Amaryllids*.

Classification of *Amaryllidaceae*. In the 18th century, Carl Linnaeus, father of modern Botany, made the first really scientific arrangement of plants and grouped them according to their sexual relationships. Since that time, additions to our knowledge have required constant revision of the classifications. In the *genus Amaryllis*, Linnaeus

included a few *Crinums*, *Zephyranthes*, *Brunsvigeas* and other plants now recognized as belonging to other genera. Linnaeus also placed *Hemerocallis*, *Agapanthus* and other genera now determined to belong to Amaryllidaceae, in the Liliaceae. In our catalogs, we attempt to use the correct and most recent botanical names with old names and common names given as synonyms.

Agapanthus. The name means Love Flower. Blooms in late spring and summer. Large, attractive umbels on tall erect stems. Favorites in southern gardens and easily grown in north in tubs or buckets, wintered in basement. Full sun. Delivery any time, except *pendulus*, which is delivered when dormant, late fall to Apr. 1.

Agapanthus longispathus. New species. Flowers resemble *Orientalis* but blooms more profusely and are more graceful. Rapid multiplier. 75c ea. 3 for \$2.00.

A. orientalis (umbellatus). **Blue Lily of the Nile.** Our variety is an especially fine one with deep blue flowers on a tall stem. Many flowers are produced in spring and summer. 50c ea. Extra large roots, 75c. Clumps in proportion.

A. orientalis, "Sky Blue." Lovely light blue. \$1.00.

A. orientalis, var. *albidus*. Has pure white flowers. \$1.50 ea.

Alstroemeria. Alstroemerias are very showy plants with long slender stems. As a cut flower they last a long time, are very beautiful and are distinctly different from the more common flowers. The individual flowers are beautifully colored in rich pastel tones and resemble orchids. They are exquisite as cut flowers. The many flowered umbels are on tall slender stems which are stiff but need the support of close planting.

Culture. They may be grown in almost full sun but slight shade is better in very hot climates. In too heavy shade they do not thrive. Plant only in well drained sandy soil to which plenty of leaf mould has been added. Do not attempt to grow them in a heavy soil. Good drainage and liberal watering are necessary. The root crowns may be covered 3" or 4" in the deep south but in middle south where there is considerable frost they may be planted deeper. Do not disturb roots when established. They are said to do well in large pots.

Alstroemeria aurantiaca. Large orange flowers with lower petals penciled brown. Delivery Dec. to March. 25c ea. \$2.50 per doz.

A. chilensis. Extremely attractive flowers in a wide range of color from nearly white to various pink, red, yellow and orange tones. One of the best and easiest to grow. 25c ea. \$2.50 doz.

A. ligtu Stinsoni. The flowers are similar to *Chilensis* but larger. The sturdy stem is 3 ft. tall. 35c ea. \$3.50 doz.

A. Assorted varieties. Contains the above and others. 20c each. \$2.00 doz.

Amarcrinum Howardii. A cross between *Brunsvigia rosea* (*Amaryllis belladonna*) and *Crinum moorei*. Flowers are a pure pink and very attractive. As it is a winter bloomer and profuse, it is a valuable bulb for a large pot. It may not flower soon after moving, but give best culture and wait if necessary. Large bulbs, \$2.50.

Amaryllis. Under this genus we are listing species and hybrids formerly listed under *Hippeastrums*. *Amaryllis* is the old-time and popular name. They are probably the most popular of all bulbs for growing in pots and equally valuable for southern gardens. They are hardy thruout the south along the Atlantic coast to N. Carolina and even up into Oklahoma they can be grown outdoors in well drained soil, planted about 4" deep and mulched with straw, leaves or brush over winter. But for that we would recommend that you plant only *A. Johnsonii* or the cheaper and usually more vigorous hybrids. The vigorous *Rutila* Hybrids are especially advised.

How To Grow Amaryllis In Pots. When bulbs are received, pot at once. Have pots and soil ready to receive them. Do not remove or injure any living roots that are attached. Moisten these roots and dip or sprinkle with Rootone. Rootone is not essential but it helps the development of new roots.

A bulb under 3" diam. needs a 6" or 7" pot. Larger bulbs should have a 7" to 8" pot in proportion to the size.

The best potting soil is a friable loam. To this add an equal volume of a mixture

composed of equal parts of sand, well rotted cow manure and rotted leaf mould. Use no peat. Bone meal is recommended, 1 tablespoonful to each pot. Mix all thoroly.

Pot the bulb with neck and upper bulb surface exposed. Water well but after that keep the soil only slightly moist until growth starts, then gradually increase. When first potted set the bulbs in a cool, light room. The best temperature now is 45° or 50°. Later the pots may be removed to a room of about 60° or 70°. 80° will force more rapid growth and earlier flowers and this is all right when the bulb is well rooted. Buds will usually have shown. Do not become impatient. Bulbs will need a fairly long time to develop roots. During this time, much water is likely to cause some rotting of injured roots. It is better to keep them in a cool room until growth shows.

After flowering, the bulbs will be shrunken and perhaps soft. A period of growth is necessary to fill them out and increase their size. If good growth is made at this important stage the bulb will be much larger than in the preceding year and offsets may be made. It is necessary to keep them growing as long as possible. When the weather is warm outside the pots may be plunged in the garden or the bulbs with entire, unbroken clumps of roots and earth may be removed from pot and reset. This method, if carefully done and the bulbs are given abundant moisture and some fertilizer thruout the summer, is the best. Bulbs may be planted in full sun, but slight shade is good where very hot summers prevail. When bulbs are well established give liberal mulchings of dairy manure. Use stable manure carefully. It is good but very strong. If it does not rain every week give a good irrigation. Before heavy frost, remove to house. Allow them a rest of several weeks but do not allow pots to dry out completely. The temperature of 45° checks growth. When you want them to start, bring to 60° and water a little. You can become expert in obtaining flowers every year. In the garden plant Amaryllis just under the soil surface.

I am frequently asked why the inquirer's bulbs do not flower. Perhaps they have flowered the first year after their purchase but not thereafter. Some state their bulbs become smaller each year. These results inevitably follow poor culture. If you give them correct culture, plenty of water and liquid manure when growing well after flowering and keep the growth luxuriant for about 6 months or more (as long as they will grow) you will have nice fat bulbs, with bud or buds formed within for the following season.

When leaves naturally begin to yellow it is a signal that they would like to rest awhile. Some bulbs will continue to have green foliage but one should reduce water to give an early winter rest. Well established bulbs can often be brought into flower in January or even by Christmas. But they should have had a few weeks dormancy preceding that.

How to judge the quality of the flowers of Amaryllis hybrids. The perfect flower of the Leopoldi type should be at least 5" to 8" across. The petals should be well rounded and broad, overlapping each other, no twisting of petals and forming a wide open flat flower. The texture should be smooth, firm and of good substance. The tube should be short. There should be little or no green in throat but as the species Leopoldi contains considerable green there are few hybrids that do not contain some green.

There should be no dull colors, like brick red. But colors should be bright and of every imaginable tone within the range of this genus.

Self colors are desirable to go along with stripes and other variations. But it is difficult to get other than red selfs and these are unusual. A few of our Select Strains, American Hybrids, are pure red, scarlet, rose or pink selfs. But they are few and not separately labelled. Don't order self colors of the American Hybrids or any colors except as listed. When you are lucky enough to draw a self color you may congratulate yourself that you received a bargain worth 3 to 10 times its cost. To be sure of a self color, order our Dutch Hybrids.

Pure white, pure pink and pure salmon are the most difficult of all to obtain, and in the order named. Pure white have often sold for \$25.00 or even more. We are fortunate to be able to offer these to you this year for about one-third of that price.

Perfection is seldom, if ever, reached. We have described the ideal Amaryllis, but we do not want our customers to assume that this describes all the Amaryllis we sell. The Select Strains of American Hybrids are excellent Amaryllis. For years they have been "the best obtainable" and are well worth our price. Cheaper than dime store bulbs at two bits.

The finest of all are our Select Strains, Dutch Hybrids. They are indeed rather close to perfect. You should own a few Dutch bulbs, save and plant the seed. The seedlings of this strain bloom in two years. They are expensive but they are a good investment, if you wish to grow seedlings and sell the bulbs.

Quantity Rates, as indicated in our Terms, do not apply to Amaryllis. The rate for three bulbs is our lowest quantity rate.

Amaryllis Species and Hybrids

Amaryllis advena. Oxblood Lily. This species blooms in the fall, Aug. to Oct. There are 5 to 7 or more flowers in an umbel on a 10" slender scape preceding the foliage. There are two color types, dark oxblood red and pink with a lavender tone. We sold nearly all our large bulbs last year and have very few this year that are large enough to sell.

Culture. Amaryllis advena is reported to be hardy by a commercial grower in the warmer parts of Mich. and very likely would prove hardy in milder climates where peaches can be grown. However, we will recommend it only for trial from Philadelphia thru southern Ohio, Indiana, Illinois, Missouri, southern Kansas and south. In the middle and deep south, it is perfectly hardy and should be included in all gardens. Rapid multiplier. Plant 6" or 8" deep in full sun. Likes heavy soil but does well in any soil. Order before Sept. 15, as they are winter growers.

Amaryllis advena. Oxblood red, 75c. Light red, 75c. Assorted, 50c ea. \$5.00 per doz.

A. ambigua. Formerly known as *A. solandriflora conspicua* but now believed to be a wild hybrid of Solandriflora. A beautiful Amaryllis with a 30" scape. Five to nine lily shaped flowers in an umbel. Pure white, with lines of pink. Rich spicy fragrance. Large bulbs, \$3.75.

A. Hybrids. Select American Strains. These are the Leopoldi Type selected from the very best American strains.

Most Amaryllis that are sold are chance seedlings. In Florida and California there are many who grow acres of bulbs. The seed is collected in the field and no selection of parents is possible. The strongest growers, not the most beautiful, produce the most seed.

Judged from the standpoint of a turnip, these seedlings are likely to produce the most beautiful, vigorous and largest bulbs. From the vegetative functions of prolific seed bearing, rapid, vigorous growth and increase they can be sold the cheapest. Dime stores often sell them. Many very well known and honorable firms handle this grade of Amaryllis. They please many customers. The "beautiful bulbs" will range in price from 35c to 75c each.

Altho these bulbs will produce flowers that please the average inexperienced amateur they are not truly representative of the advancement made in the quality of Amaryllis flowers. To appreciate fully the quality of any flower, one needs experience, study and the best examples for comparison.

Our Select Strains, American Hybrids in contrast with the average amaryllis, are seedlings of selected parents. The parents are not judged as vegetables (nature's process in a large measure) but for the beauty and perfection of their flowers. These parent bulbs are of a quality that would command a price of from \$5.00 to \$25.00 or more per bulb. The parents are grown in greenhouses which exclude insects and the possibility of nature's way of crossing. They are all hand pollinated and study is given to the proper mating of the parents.

The Color classes are founded upon the color of the seed parent. Not all come

true to this color and these are rogued out at the first blooming. But often a few rogues, or off-colors will be found. It is best to buy 3 or more of a color in order to get the nearest to your ideal. But every bulb will give a good flower and be worth the price paid. A reasonable percentage of the bulbs will give very superior flowers and these bulbs may be worth from double to several times their cost.

The process of removing off-colors, is called "rogueing." Due to recent lack of labor, we and other growers have found it most difficult to rogue our bulbs and there are many "off colors" in all the following color classes. If you get a bulb you do not want you may exchange it for another bulb. Return the bulb with letter attached to outside of package and send enough postage for the replacement. But very few wish to do that because of the high quality of all the bulbs. One is also likely to obtain a bulb of such high quality that the grower would have preferred to save it for breeding and seed production. We have found near white and pure white among other colors.

Select Strains, American Hybrids, Assorted Colors. $2\frac{1}{2}$ " diam. or over, 90c ea. Three for \$2.50. 3" diam. or over, \$2.50 ea.

Select Strains, Am. Hybrids, White Background. White with light to medium markings of red, pink or rose. $2\frac{1}{2}$ ", \$1.00 ea. 3 for \$2.85. 3" or over, \$2.50 ea.

Select Strains, Am. Hybrids, Near White. Nearer to white than White Backgrounds. Some are almost pure white, others a little more heavily marked, but none have much color. Large bulbs near to 3" or more, \$4.00 ea.

Select Strains, Am. Hybrids, Red. $2\frac{1}{2}$ ", \$1.00 ea. 3 for \$2.85. 3" or over, \$2.50. We have a few of these in **Red Self Color**, the 3" size, for \$5.00 ea.

Select Strains, Am. Hybrids, Scarlet, a lighter red, $2\frac{1}{2}$ ", \$1.00 ea. 3 for \$2.85.

Select Strains, Am. Hybrids, Rose. Various shades of rose. Some are the American Beauty Rose. 3", \$3.00 ea.

Select Strains. Dutch Hybrids. We have a surprise for Amaryllis lovers, this fall. We have bought Amaryllis from all prominent growers, everywhere. The best we have ever seen are from a Holland grower. On inquiry this summer, he informed me he had been able to protect and save most of his stock.

These are the highest type of Leopoldi hybrids in pure self colors, and in many shades of each color. Naturally, the pure self colors are much more valuable than those that are merely red, salmon, etc., with other markings. They are also superior in the form of the flower, with rounded petals, wide open flowers.

I have always considered a pure white Amaryllis or a pure pink of good size and form worth \$10.00 to \$25.00 each or even more and other pure self colors nearly as much. I was surprised at the comparatively low price at which these were offered. Formerly, I have paid wholesale about the same price for which I am able to sell these at retail.

I have been able to get only a few bulbs. And since we usually sell about 6,000 per year you should order early, as I fear there will not be enough of some colors. Delivery will be made as soon as I receive the bulbs. This may be a little later than we are able to deliver American hybrids. Be sure to include extra insurance for a separate mailing and for the north a little for extra heavy packing.

Size. The smallest blooming size is 18 - 20 cm., or $2\frac{1}{3}$ " to $2\frac{1}{2}$ " diam. These are one size larger, 20 - 22 cm., or from a little over $2\frac{1}{2}$ " to a little over $2\frac{3}{4}$ ". This is a **good blooming size**. When you compare our prices, be sure to compare with those of equal size.

Select Strains, Dutch Hybrids, Pure White. \$10.00 ea.

Select Strains, Dutch Hybrids, Pure Red. \$7.50 ea.

Select Strains, Dutch Hybrids, Pure Salmon. \$9.00 ea.

Select Strains, Dutch Hybrids, Pure Pink. \$12.00 ea.

Select Strains, Dutch Hybrids, Purple. A very unusual color. \$10.50 ea.

Breeders Collection. This strain is especially fine for producing seeds of the highest type of Amaryllis. The seedlings of this strain bloom when two years old. See our directions below for pollinating flowers and for growing from seed. Thus, two years

will bring an exceptional profit, either pleasure or cash. We offer one bulb of each color, 5 bulbs in all, value \$49.00, for \$45.00. Order as Breeders Collection of Dutch Hybrid Amaryllis, 5 var. for \$45.00.

A. American Hybrids. Assorted Colors. These are from various sources and are good Amaryllis. Better than dime store types. Blooming sizes, 50c ea. Large bulbs, nearly 3" or more, 75c ea.

A. Rutila Hybrids. This is a California strain apparently derived from the species Rutila. They are mostly one color, orange scarlet with white in throat and a green tinted keel. This is as vigorous a strain as I have ever seen and very rapid multipliers. The color and vigor make them valuable for landscape use where a bright splash of color is wanted. It also recommends them for planting deep on the border line of Amaryllis hardiness in parts of Oregon, Wash., Okla., Ark., N. Car., etc. Large bulbs, nearly 3" and up. 75c ea. 3 for \$2.10.

A. Diener's Posthumous Hybrids. These are Diener's latest, grown from his own seed and planted by him. Claims were made for gigantic flowers but we find them little larger than Select Strains and not as desirable. They are Equestre type and as many umbels will have from 5 to 8 flowers (from large bulbs) it may be that by disbudding, leaving only about two to develop, they might attain the 12" to 16" diameter claimed. Assorted colors only. Large bulbs, \$2.50.

A. Johnsonii. The first Amaryllis hybrid, now distributed all over the world. Dark red with contrasting broad white band thru center of petals. One of the hardiest, easiest to grow and most rapid in increase. 50c ea. Largest size, 75c ea.

Amaryllis Seed. We are unable to produce enough seed for our own planting. It is far better anyway for you to grow your own seed as that which you buy is often too old. Amaryllis seed should be planted shortly after ripening and drying. One year old seed is unlikely to grow in a good percentage.

Plant Breeding is an interesting science and art. Undertaken as a hobby, it has often resulted in fame. It will involve and develop great skill, ideals of beauty, good taste and intelligence. I suggest you start with our Select Strains. Get several bulbs and use the pollen only from those you like the best. Better still start with even one bulb, several, or a collection of the 5 colors of the Dutch Hybrids. Cross pollination is easily accomplished by placing the powdery pollen borne by the six stamens on the stigma in the center. The stigma when ready for pollen will usually be opened into three parts. When the seed pod is ripe it bursts open and may be removed and dried. Plant the seed (soon) in a fine sandy loam containing plenty of humus. Do not use peat. Cover seed about $\frac{1}{2}$ ". Seedlings may be grown in pots in house or greenhouse where they will continue to grow all year without a dormant interval until they flower. Usually this requires 2 to 3 years. In the warm south they can be grown outside under the half shade of lath. But frost usually destroys foliage in winter and cool nights interrupt growth, slowing development.

Brunsvigia rosea. Synonyms, *Amaryllis belladonna*, *Callicore rosea*. This bulb is familiar in Calif. and many parts of the south as *Amaryllis belladonna*, Naked Lady Lily, etc.

These begin to flower often in late July. The variety **Major** is in full flower in Aug. **Minor** follows soon after. The umbels are many flowered and the flowers are of the most exquisite pink and most entrancing fragrance. They are not suitable for pot growing as in pots they flower only the first year. But that flower is well worth the cost of the bulb.

It is hardy where winter temperatures go as low as 10° or 12° above zero. That limits its culture to the south, and along the coasts to N. Car. and the state of Washington.

Order the var. "Major" before Sept. 5, if you wish to see the flower this year. The var. "Minor" will likely bloom this fall if ordered before Oct. 1.

Brunsvigia rosea, major. Pure pink, 40c ea. L. 50c ea. Jumbo 80c.

B. rosea, minor. Later to flower. Pink with lighter throat. 65c.

B. rosea, var. "Ethel." This, our seedling, is probably not different from some already named variety. This name will be abandoned when we find the correct one. Dark coral rose with white throat. Late blooming. One of most beautiful. \$2.00.

Clivias. Altho easy to grow and to flower by the amateur, they will always be classed with the aristocrats of flowering bulbs, because the flowers easily place them there. They increase so slowly by division that the chief method must be thru the freely produced seeds. But Clivias require at least five years and usually seven, to flower from seeds. This time involves expense. They can never become very cheap.

Clivias have evergreen, strap-like foliage somewhat resembling that of Amaryllis.

The flowers are produced in umbels of 10 to 25, in rich and exquisite tones of orange, in March and April. When not in flower the deep rich green foliage and later the red fruits are most ornamental.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced $\frac{1}{2}$ " apart and in garden under Avocado (evergreen) trees. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well watered after flowering, all summer and fall. Liquid fertilizer occasionally helps. When growth ceases in late fall rest them by giving them less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperatures from above 32° to not much over 50°. Pots should be 8" for a small plant up to 12" for larger. As they grow and increase, do not divide but shift to larger pots. Drainage must be perfect. Potting soil is described under "General Culture Directions." pH 7 is about right. One cannot guarantee a Clivia to flower the first year after moving tho they usually do.

The foliage of our Clivias, grown outside in the ground, will not be as perfect as that of pot grown plants. But when potted, they replace the old foliage in a few months and become specimen plants.

Clivia miniata. Wide open flowers of soft yellow orange. Hardest, \$3.00 ea.

C. miniata hybrids. Similar to the species "miniata" in foliage, hardiness, wide open flowers, etc., but there is some variation in color and form of flower. Most of them are in light orange tones. A few are dark and a few have a white throat. Do not express your color preference for any Clivia hybrids as we cannot tell the color from the plant. Blooming size, \$5.00 ea.

Crinums. Send for special price list.

Haemanthus. This south African genus of the Amaryllis family is rare in cultivation, therefore unusual. They are hardy only in almost frost free climates like So. Calif. and Florida, but are rare pot plants in the north. The soil must be well drained and should be composed of a mixture of loam, leaf mould and peat, with plenty of sand. The entire mixture should feel gritty. When in vigorous growth, the plants can use weak manure water or light, successive mulchings of manure. In our spring catalogs we list *H. Katherinae*, which is very rare and unusual and most gorgeous in beauty.

Haemanthus coccineus. Blood Lily. This very rare bulb produces two opposite leaves, 3" wide, which lie on the ground. Winter grower. The bright red flowers are small but very numerous in an umbel 3" to 4" wide. These precede the foliage in early Sept. The 6" to 9" green stem is heavily spotted with red. If ordered after Sept. 15, it may not flower this year. Give full sun or half shade. \$3.00 ea.

H. albidus. Two or more rather stiff erect evergreen leaves. The small white flowers, 100 or more, are in a dense umbel. A rare and unusual plant from Holland, very pretty. \$4.50 ea.

H. puniceus. Smaller, evergreen plant that makes a desirable pot plant of easy culture. Small umbel of scarlet flowers, on a mottled 12" stem, followed by red fruits. Flowers in spring as a pot plant. Delivery any time. \$3.75 ea.

Hemerocallis. Daylily. The flowers range in color from dark bronzy red, thru pastel tones of pink to orange and yellow. They are borne on a branching scape well above the foliage.

The Greek name, meaning "beautiful for a day," refers to an individual flower. But these are so freely produced, thru a long period that "beautiful every day" would be more apt, as a collection of several sorts show masses of flowers thruout the spring, summer and fall and here we often have some winter flowers. The modern sobriquet of "The Perennial Supreme" is well deserved.

Culture. While their beauty is their greatest recommendation, their easy culture and hardiness adds to their desirability. They will succeed where any plant will succeed. I have known abandoned plants here, where we have arid, hot summers, to persist for years. But that must not be their fate. They grow well in full sun. Slight shade is better. If given constant moisture about their roots, preserving this and coolness of the earth with a good mulch, the plants are ideally situated and respond with generosity. They are hardy even in severe winters in the north. They are fibrous rooted, not bulbs, and must be planted at once when received. Altho they can be moved any time, it is better to ship from late fall to early spring, which we do.

They are an almost perfect border or landscape plant, never have to be dug and replanted. All that you must do for them is keep the weeds down and water. A heavy leafy mulch helps every way.

In Daylilies, the sepals are colored and petal-like and are an essential part of the floral display.

Hemerocallis Araby. A lovely pastel color, with the effect of bronze on gold dust. 30". \$3.00 ea.

H. Bagdad. Coppery red over orange veins. Mid-zone of madder brown. Very striking large flowers. 3 ft. June-July. \$1.00.

H. Calypso. Large, fragrant lemon yellow flowers. Opens in evening. 42". June-Aug. 30c ea. \$3.00 per doz.

H. Cecil Houdyshel. A Dr. Traub origination. A deep crimson, with an old copper shade that makes it outstanding in our garden. Slight shade gives better color to flowers. 3 ft. June-July. \$3.00.

H. Chengtu. Brilliant coppery orange-red with carmine mid-zone. 3 ft. July-Sept. \$1.00.

H. Cinnabar. Cinnamon sprinkled over orange. Strongly gold-glistening. 30". July-Aug. 60c.

H. Crown Prince. Color like Mikado. 30". June-Aug. 25c ea. Per doz. \$2.25.

H. Dauntless. Cadmium yellow. Fulvous red blended in mid-zone. Pastel effect. 30". June-Aug. \$1.25.

H. Florham. Still popular old hybrid. Large, golden yellow. May-July. 50c.

H. Florida. Pastel shades. Light chrome yellow with rose blush. Darker mid-zone. \$2.50.

H. Fragrance. A fine deep yellow. Fragrant. \$1.00.

H. Kwanso. The Double Orange Daylily. 25c ea. 3 for 50c.

H. Linda. Petals, ruffled golden yellow, flecked with cinnamon with rose-zone. Sepals, pure yellow. Very lovely. \$1.50.

H. Margaret Perry. Brilliant orange-scarlet. 4 ft. July-Aug. 35c.

H. Mikado. Orange with mahogany-red zone. A favorite. 3 ft. May-July. 50c.

H. Nubiana. Dark chocolate-red with yellow stripe in petals. One of the darkest varieties. 2 ft. \$4.00.

H. Patricia. Pale yellow. Large fragrant flowers. 30". July-Aug. \$1.50.

H. Radiant. Rich orange. 42". June-July. 50c.

H. Rajah. Deep English red with darker red veins. Garnet red eye-zone. 40". July-Aug. \$1.75.

H. Rosita. Near carmine-crimson with coppery red tone. 36". Part shade preferred. \$3.00.

H. Serenade. Rose-fulvous markings on apricot cream. Faintly overcast darker. 4 ft. June-July. \$2.00.

H. Sibyl. Dark purple-red petals, lighter sepals. \$3.00.

H. Soudan. Lemon yellow. Broad wavy petals and sepals. 3 ft. June-July. 50c.

H. Spitfire. Originator's description. Seems never to quit blooming in spring and summer. Fiery red with yellow midrib, yellow throat. Small flowers but in great profusion. 2½ ft. Apr., May, June (and later here). \$2.00.

H. Vesta. Deep orange with glistening gold sheen. 30". May-July. \$1.00.

H. Vulcan. Dark maroon-red. 30". July-Aug. \$2.25.

H. Buck's Hybrids. These were produced by a very talented Daylily expert, Mr. Quinn Buck. Most of them are good enough to name and introduce but because they are not distinctly different from other named varieties, it has not been done. No descriptions, but yellow, gold and orange predominate. Price, single plants, 50c ea. 3 for \$1.00. We can furnish large clumps that will make fine specimen clumps for \$2.50, by express, f.o.b.

Hymenocallis. **Spider Lilies.** The true Spider Lilies are pure white with long narrow petals and long stamens, giving a fancied spidery appearance. The so-called Red Spider Lily and Golden Spider Lily are *Lycoris*. **Culture.** They are hardy in the south and may be planted deep on the border-line as in N. Car., Okla., etc. They do exceptionally well in pots but are not winter bloomers.

Hymenocallis sp. **Tropical Spider Lily.** This appears to be the same as *H. rotata* and *H. tenuiflora* and these two appear to be one species. This is a large species, with pure snow-white flowers over 7" wide. 50c ea.

Ismene. We will list these in the Spring Catalog as spring is a better time to plant them.

Leucojum aestivum. Hardy in north. Blooms often before snow is gone. Dainty white flowers, each petal with a vivid green dot. Plant 4" to 6" deep. Do well in full sun, a little better in half shade. 10c ea. 90c doz.

Lycoris are natives of Japan and China. A few of them are now scarce because none can be imported. Most of them are winter growers.

Culture. The species *Radiata* do well in any good garden soil containing humus. All *Lycoris* prefer neutral or mildly acid soil and for *Aurea* especially one should incorporate some peat in the planting furrow. *Aurea* also much prefers a sandy soil and liberal watering when in growth.

Lycoris radiata. **Red Spider Lily.** Coral red flowers in a several flowered umbel in Sept. Flowers are followed by the foliage. Flowers have narrow undulate petals and long stamens which give the "spidery" appearance. This is a common flower in the south and one of our most beautiful. Hardy along coast to North Carolina and on Pacific Coast to Vancouver. In pots it flowers only the first year. 35c ea. Largest bulbs, 50c ea.

L. aurea. **Golden Spider Lily.** This is the famous Hurricane Lily of St. Augustine, Fla. It is one of nature's most beautiful flowers, but rare and expensive. They must be ordered before Sept. 15 as they bloom very early and we have only about 25 blooming size bulbs. \$2.50 ea.

L. purpurea. The brilliant blue and purple markings on the flower make a startling effect. This species is hardy in the north. \$3.00 ea. Order before Oct. 1.

L. squamigera. **Amaryllis Halli.** The hardy Amaryllis that resembles *Brunsvigia rosea* (*Amaryllis belladonna*). \$1.00. Order before Oct. 1.

Narcissus and Daffodils

Both belong to the genus *Narcissus* of the Amaryllidaceae.

Culture. All Daffodils except the *Polyanthus* *Narcissus* are hardy both in the mild climate of the south as well as in the colder northern states. In the north especially it is best to plant the bulbs rather deep where the frost does not reach. Six inches is

about right. Smaller bulbs may go more shallow and be mulched. In California too and all the south there is an advantage in deep planting. Plant September to November.

Sandy loam is the best soil, but any good rich garden soil will do. Use no fresh manure. The addition of lime to the soil is good, especially if leaf mould is used in sandy soils.

In pots. Narcissi force easily. Pot the bulbs early for earlier flowers, Sept. to Oct. The soil should be $\frac{2}{3}$ sandy loam, $\frac{1}{3}$ leaf mould and perfectly decayed dairy manure (use both or either one). Water the pots well. The Polyanthus varieties like Chinese Lilies may be then placed in a cool room and receive sufficient water to start growth. To start Daffodils, plunge the pots in a cold frame or pit outside in the shade, after the first watering, and cover pots with 6" of sand, surrounding the sides well. Thus they will be cool and roots will develop. The sand will prevent evaporation.

As soon as they are well rooted they can be brought inside. Examine the pots first in about 6 weeks. The roots should penetrate the soil to the sides of the pot. By reversing pots held in both hands and tapping edge of pot one can with care lift a pot up to see if roots have reached the proper stage. There is no use to try to force the bulbs before abundant root development is reached. Only failure results.

The room temperature for forcing can be about 55° or 60° at night. Not much warmer during day. Set pots in a sunny window. Shift Daffodils to the garden when thru blooming as they cannot be forced two years in succession.

Trumpet Daffodils

Trumpet Daffodils are hardy north and south but should not be planted in S. Fla. as they do not succeed in the tropics. In the following list our prices are as low as possible. No two catalogs will agree as the size of bulbs offered may differ as in the case of our King Alfred which we offer as low as 75c per doz. up to \$2.25 per doz. We offer several of the best reasonably priced, newer Daffodils. You should at least have one each of all varieties for trial. These are healthy large bulbs and will multiply rapidly as well as educate you in Daffodils.

Aerolite. Pure golden Daffodil. Very large but beautifully proportioned and graceful. Medium early but long lasting in the garden or when cut. Excellent florists variety. 25c ea. \$2.50 per doz.

Alaska. Giant flower of deepest gold. Trumpet deeply frilled and edges recurved. A fine variety for cutting and forces easily in pots. 30c ea. \$3.00 per doz.

Alasnam. Wide, densely frilled trumpet of pure deep yellow, a shade deeper than perianth. Very early and therefore much desired by cut flower growers who want one earlier and better than King Alfred. 20c ea. \$2.00 per doz.

Beersheba. Pure white. A gigantic and magnificent flower 5" wide, of perfect form and proportion. Long, slender trumpet flanged at mouth. An immaculately beautiful Daffodil. \$1.25 ea.

Ben Hur. A glorious "loud speaker," deeply frilled trumpet of pure Roman Gold, 2 $\frac{1}{2}$ " wide. Tho immense, it is beautifully proportioned. One of the best new Daffodils. 35c ea. \$3.50 per doz.

Dawson City. A fine garden and exhibition variety. Broad, flat flower with beautiful flanged trumpet. Golden yellow self. 25c ea. \$2.50 doz.

Diotima. Considered the best of the new super-giant, yellow Trumpet Daffodils. The flower is beautifully proportioned and carried on a 2 ft. stem. It is not only super-giant but extra early, being 10 days ahead of King Alfred. A top-notcher. 50c ea. \$5.00 per doz.

Hector Treub. Uniform deep golden yellow. Very early and easy in pots. An improved King Alfred. 20c ea. \$2.00 per doz.

Hendrik Ibsen. A real "golden Daffodil." Pure self color and gracefully formed. Free flowering and very early. 20c ea. \$2.00 per doz.

King Alfred. The favorite of florists and gardeners. No collection is complete

without this old favorite and it is the one to buy in quantity or if one must plant only one sort. It is the standard by which Daffodils are evaluated. Pure, deepest gold, beautiful and graceful in form. Small bulbs, most of which will flower under proper culture (but they are not so likely to flower unless you do give proper culture) 10c ea. 6 for 50c or 75c per doz. **Good blooming size, round bulbs, 15c ea., \$1.50 per doz.** Per 100, \$8.00 by express, f.o.b.—Largest size, round bulbs, really jumbos 25c ea. 6 for \$1.25. \$2.25 per doz. Per 100, \$15.00 by express, f.o.b. The largest size gives several flowers per bulb, the blooming size usually about two and the small bulbs, one smaller flower. But small bulbs become large in one year.

Mrs. R. O. Backhouse. The best of the famous Pink Daffodils, much more pink than the Lovenest. The perianth is white and the long trumpet is a rich apricot pink, changing to shell pink at the deeply fringed edge. The possession of even one will excite interest in your daffodil collection. \$1.25 ea. 6 for \$6.50 or \$12.00 per doz. Smaller bulbs are sold by some dealers for less.

Winter Gold. Perianth bright yellow. The long frilled trumpet is deep golden yellow. This daffodil produces elegant flowers in Feb. as early as the rather insignificant "Golden Spur" and in addition Winter Gold is a very showy, 18" flower. Forces easily in pots for mid-winter bloom. 25c ea. \$2.50 per doz.

Leedsi Daffodils. The above are all Long Trumpet Daffodils. The Leedsi have a smaller and shorter trumpet but are very fine daffodils. We offer Leedsi, "Crystal Queen," pure white perianth with primrose trumpet that soon fades to white, giving the effect of a pure white daffodil. These are mixed with a yellow daffodil, probably Incomparabilis Helios. You might get all Helios or all Crystal Queen. Either sort is worth more. 15c ea. 6 for 60c. \$1.00 per doz.

Nerine. This genus is seldom seen in America, altho it is one of the most beautiful and varied of the Amaryllids. They bloom in succession from Aug. 1 thru Jan. They are hardy only in the south where temperatures seldom go under 26°. But they are one of the finest pot bulbs. **Culture:** Pot or plant in mildly acid to neutral soil. Sandy soils are more likely to be acid and drainage is better. Use peat or leaf mould to bring soil to pH 6.5 or 7. Alkaline soil is the most frequent cause of failure. Pot bulbs at once with bulb well covered and 2" to 4" deep in gardens. Full sun. When foliage yellows withhold water but be sure they have made a vigorous growth.

Nerine Bowdenii. 10 or more rose pink flowers in an umbel 9" wide on a 15" scape. The finest of all and of easy culture. Delivery Jan. to July, sometimes later. \$1.00 and \$1.50 ea. Budded (usually in Dec.) \$2.00 ea.

N. Bowdenii, Pink Beauty. Larger and finer. Late spring delivery. \$5.00 ea. Budded (usually Jan.) \$6.00 ea.

N. filifolia. Lovely small Nerine with evergreen thread like foliage. Carmine pink flowers on 12" stem. A dozen bulbs may go into a 6" pot. Bloom in Sept. Delivery, any time. 15c ea. \$1.00 doz. If ordered after Sept. 15, you may get no flowers the first year.

N. massonorum. Earliest, often mid-July. Foliage like N. filifolia. Flowers resemble it but smaller, on a shorter scape. Very long spathe. Delivery any time. 50c ea.

N. species unknown. This is either undulata or erubescens, which are very similar. Flowers similar to Filifolia but larger and on a 15" to 18" scape. Fine for cutting. 75c ea.

Sprekelia formosissima superba. We found this variety (described and named by Hayward in 1938 *Herbertia*) in an old California Garden. The flowers are about twice as large as the common type, a lighter and more pleasing red color. The foliage is evergreen and the flowers are freely produced at intervals thruout the year. We call this the Orchid Amaryllis because of the orchid-like shape. Jumbo bulbs, 75c ea. M. 50c ea.

Tulbaghia violacea. A close relative of Agapanthus, but small enough to plant 3 in a 5" pot. Flowers are mauve to Chinese violet in an umbel on 24" stems. Begins as soon as established and blooms almost continuously thru the year—winter and summer. Foliage has garlic odor when bruised. 35c ea. 3 for \$1.00.

The Alliae. This group is now placed in the Amaryllis family. Sandy loam is preferred. Do not add too much leaf mould and no peat, as very acid soil is not so good. Plant about $2\frac{1}{2}$ " deep. The species Allium are onions and should be grown in full sun unless noted.

A. sativum. Burbank's Elephant Garlic. This is the largest, juiciest and sweetest garlic and the easiest to peel. It often makes solid bulbs about 2" diam. Others divide into very large cloves. Clusters of bulblets form at the base like Gladiolus. The flowers and plants are ornamental in the herb garden or border and give a delicious flavor to salads, etc. 15c ea. \$1.00 per doz.

A. Schoenoprasum. True Chives. Lovely little plants with lavender flowers, used for edgings in the flower or herb garden and add zest to salads. 10c ea. 4 for 25c.

A. tuberosum. Oriental Garlic. A pretty Allium with white flowers. An ornament in the garden, indispensable in the herb garden. Leaves give a most delicious flavor to salads without the long-lasting high-powered after effect of garlic. In north, winter the plants in pots. Plants 25c ea.

A. triquetrum. Very fine white flowering allium. The many large flowers in a large umbel are pendulous. It does well in full sun like most alliums but even better in partial shade. 10c ea. 3 for 25c.

Brodiaea uniflora. Lovely porcelain blue flowers on a low plant. Usually grown in pots in the north but they are hardy in Ohio. Culture, like freesias. 4 for 20c. 45c doz.

Bulbs for Christmas Presents

Bulbs are a solution to your Christmas shopping problem. Do you remember the difficulties recently? The crowds, the insufficient stocks, the makeshift products, plastics that should have been steel, etc.?

Probably at least 50% of the presents bought are not what the recipient would have liked. But most people like bulbs for their house and garden.

Our bulbs are all pre-war workmanship, perfect in design and material. Prices are not inflationary.

You don't have to stand in line or struggle with a crowd to get waited on. You sit down in a comfortable chair in your own home, make out your list and enclose your check. The postman delivers them. Simple and easy.

Why not order a dozen Amaryllis bulbs, Select Strains, one bulb for each of a dozen friends? Potted, they will be worth \$1.50 each or more. Or give the dry bulbs.

Even the inexpensive Oxalis make wonderful little presents, especially if you pot them and get them started.

For birthday, Christmas or any day you wish to remember your friends with a present, nothing is more suitable than a bulb or bulbs.

IRIS FAMILY—Iridaceae

The Iris is the type genus of this family, which includes Iris, Gladiolus, Watsonias, Freesias, Sparaxis, Tritonias, Babianas, Dietes, etc., listed on following pages.

Tall Bearded Iris. We offer more than 100 fine modern Iris at reasonable prices in a special price list. Send for Iris Price List if interested.

Dutch Iris. These are bulbous Iris. The flowers are not fragile like bearded Iris and they are therefore very useful for cutting.

Culture. They should be planted in the fall before Oct. 30 as the bulbs often deteriorate after that date. Later plantings may succeed if bulbs are good and not infested with plant lice. Plant 1" to 3" apart and 3" to 4" deep depending on size of bulbs. They are hardy in milder sections of north but a mulch is advisable. Full sun or slight shade.

Blue Horizon. Very beautiful flower, broad and sturdy. Light violet blue standards and soft sky blue falls. 27" tall. 3 for 25c. 75c doz.

Imperator. Tall, dark blue. Favorite for cutting. 3 for 25c. Per doz. 75c.

Wedgewood. A most lovely Wedgewood blue. The earliest to flower. Popular florists flower. In the north it needs protection of a winter mulch. It will force in pots. 3 for 25c. 85c per doz.

Yellow Queen. Pure deep golden yellow. Early. We got a better price for our cut flowers last season than we priced the bulbs. 3 for 25c. 90c doz.

Assorted varieties. The above and other sorts. 3 for 25c. 85c per doz.

Gladiolus

Culture: Glads planted Nov. 15 to Mar. 1 in Southern California and thruout the south (a little later in Northern California and early as possible in spring in the east) are reasonably sure to escape the attack of thrips. Our Glad bulbs are especially grown for this purpose, matured early and dug in August. But if you plant recently dug bulbs you will gain nothing; they will continue their rest of three months before starting.

Thrips are very small insects that suck the juices from the plant. They cause the flowers to wither or appear burned, and appear only after weather becomes warm.

To avoid the damage they do, four measures are effective: Plant early; plant clean, treated bulbs; keep them always moist by overhead sprinkling. Gladiolus that are sprinkled one-half hour every evening are more likely to escape thrips damage.

The most effective method of getting rid of them if they appear in the garden is to dust with a powder, 5% D. D. T. and Sulphur 95%.

Treating bulbs. Mix 4 teaspoonsful of Lysol in one gallon of water. Soak the bulbs 6 hours in this solution. It may be used several times but not after standing over one week. This is an acid solution and encourages root growth instead of delaying it. This kills thrips and most disease infections. Do not treat bulbs bought from us. We treat before selling. We do not advise use of mercurial solutions as they injure the bulbs and delay root formation.

Plant 4" deep; small 3"; bulblets 2". Twice their diameter apart. One can plant two rows, staggered in a 4" wide furrow or closer in a single row. Rows about 20" apart. Alkaline soils produce poor Glads. Soil should be neutral to mildly acid. Leaf mould or peat added is useful. Peat causes soil to dry out more rapidly and imported peat is hard to get. Domestic peat is often harmful because alkaline. Use no fresh manure, but well rotted manure is fine. Top mulch of leaf mould or imported peat is good.

Keep Glads growing with plenty of water and best culture for about two months after flowering. It is best to dig bulbs in the south, and necessary in the north.

Sizes and Prices. L. means "large," size 1 and 2, 1 $\frac{1}{4}$ - 1 $\frac{1}{2}$ " (or more) in diameter. M. is "medium" and includes No. 3 and 4 sizes, $\frac{3}{4}$ " to 1 $\frac{1}{4}$ " diam. S. means "small," under $\frac{3}{4}$ " diam. Large and medium bulbs give good long spikes. Small bulbs usually bloom in most varieties and when planted early, given good culture and plenty of water they usually make fairly long spikes. Early planted bulblets often flower. Large bulbs bloom earlier and throw more and longer spikes. **Prices** are for one bulb as elsewhere in this catalog. A dozen, all of one sort, costs ten times the price of one unless otherwise stated. Six are sold at dozen rate. Don't forget **Sales Tax** in Calif.

Orders for Glads will be filled by Nov. or early Dec. in time for early planting. We suggest you order at once with remittance to be sure you get them as our stocks are limited.

Substitution. If you order early there is likely to be no substitution, but when out of a variety we send another as nearly like it as possible and of equal or greater value. If you do not approve this, request no substitution.

This fall we are offering many of the newer and better varieties and dropping others. These new introductions are larger flowered, taller and improved in color. Many of them are really sensational and all are of exhibition quality. You will find the best pink, best yellow, best lavender, etc., so far produced in the following list.

Naturally they are higher priced but a few of the best are more desirable than many of the second best. We are obliged to make the descriptions very brief.

Amberglow. (Palmer, originator of Picardy). Tall, amber yellow. M. 2 for 15c. 75c doz.

Amrita. (Palmer). Ruffled. Clear capucine buff. M. 2 for 15c. 75c per doz.

Barcarole. (Palmer). Exquisite large, clear grenadine orange. M. 2 for 15c. 75c per doz.

Big Top. Not only has the largest flowers and tallest spikes but is one of the most beautiful. Light pink with carmine feather. L. 25c ea. Per doz. \$2.75.

Bit O'Heaven. Fine orange. Excellent cut flower. M. 2 for 15c. 75c doz.

Black Opal. Very deep maroon red. Darkest and best. Tall exhibition spikes, many open. L. 12c ea. Per doz. \$1.25.

Blue Beauty. New, best blue. Fine color. L. 8c ea. 80c per doz.

Capeheart. Light salmon-rose. One of our best cut flowers. Tall, early. Extra fine. L. 15c ea. \$1.50 per doz.

Chamouny. Tall, deep cerise rose, bordered silver. A new color for Glads and most beautiful. M. 20c ea.

Corona. Another color break. Creamy pink with deep pink picotee edge. A florist's favorite, extra fine. L. 15c ea. Per doz. \$1.50.

Debonaire. La France pink. L. 7c ea. 70c doz.

Elizabeth The Queen. The best lavender yet introduced. Immense pink-lavender, ruffled flowers, many open. Really sensational. A "must have" for all glad lovers. L. 35c ea. Per doz. \$3.75.

Ethel Cave Cole. The best pink glad. Tall, large flowered and early. For two years we have sold the cut flowers wholesale for the price of the bulbs. L. 20c ea. Per doz. \$2.25.

Jacinth. Early orange pink, Picardy seedling. M. 2 for 15c. 75c doz.

Jasmine. (Palmer) Large, ruffled lemon yellow. Tall. One of the best yellows. Bulbs 1" or over, 25c ea., \$2.50 per doz.

Libelle. The color is a clear fine blue. L. 5c ea. 50c doz.

Los Angeles. Orange pink. For early planting, still one of the best. Excellent forcer and winter grower. L. 6c ea. 50c doz.

Margaret Beaton. Large white, scarlet blotch in throat. Popular cut flower. L. 10c each. 80c doz.

Pacifica. New tall white, lightly overcast with the Pacific haze. L. 20c ea. \$2.25 doz.

Pelegrina. Very early, deep violet blue. L. 5c ea. 50c doz.

Purple Supreme. Newest and best purple. Very tall and many flowers open. Fine exhibition type. L. 40c ea. \$4.00 per doz.

Red Charm. Finest new red. Tall, many open. L. 25c ea. \$2.50 per doz.

Rosa Van Lima. Light rose. Choice commercial and exhibition type. M. 8c ea. 80c doz.

Shirley Temple. Immense ruffled cream. L. 8c ea. 80c doz.

Stoplight. Brilliant red flowers on an impressive spike. L. 25c ea. \$2.50 per doz.

The Orchid. Individual flowers resemble an orchid in color and shape, and make lovely corsages. Do not make large bulbs or plants. 1" bulbs, 6c ea. 50c per doz.

Virginia. The purest red color. 7c ea. 65c per doz.

Wanda. A new and very lovely cream. 15c ea. \$1.25 doz.

White Gold. Very popular, large cream with a yellow throat. L. 35c ea. Per doz. \$3.50.

Assorted varieties. This mixture contains accidental mixtures, lost names and surpluses and is not necessarily a "balanced mixture." 6c ea. 60c doz.

Watsonia

Close relative of the Gladiolus but winter growing and earlier in bloom. They grow as tall or taller. The flowers are smaller but in very lovely spikes useful for cutting. The colors are varied, in most pleasing tones and bloom early if planted early. Better even the second and third years. Easy to have them for Decoration Day or before in Southern California. In most cases we have discarded names and substituted the name of their color.

Culture: About the same as Glads. In the south they must be planted in early fall (Sept. best) as the bulbs sprout early. Hardy at Washington, D. C., and probably in all climates where temperatures do not go below zero, if planted in a well protected place, 5" or 6" deep and well mulched.

Burbank's Lavender. Large lilac flowers. 10c ea. 75c per doz. Per 100, \$3.50.

Ed Sturtevant. Grenadine or light orange scarlet. 10c ea. 75c doz. Per 100, \$6.00.

Giant Lavender. Our favorite Watsonia. Sells best on flower market. Huge rose-purple ("orchid") flowers on a 6 ft. plant. We could not recently list this very desirable sort but this is an opportunity for those who have inquired. 35c ea. \$4.00 per doz.

Liseran Purple. "Orchid." 10c ea. 75c doz. Per 100, \$3.50 by express, f.o.b.

Rosolane Purple. "Orchid." 10c ea. 75c doz. Per 100, \$3.50 by express, f.o.b.

Marginata. A species uniquely different. Very tall, slender, straight spikes with small flowers surrounding the stem for as much as upper 3'. Many lavender tones. Fine in flower arrangements. 10c ea. \$1.00 doz. \$7.50 per 100.

White. Its pure white flowers make it the favorite Watsonia of many. 10c ea. 60c doz. Per 100, \$5.00.

If you want the largest bulbs of any sort, at the 100 rate, you may have them at this listed price f.o.b. by express. We send only medium bulbs at 100 rate postpaid.

Wholesale offer. Watsonias increase rapidly and make such large clumps that we find we must replant our field. In order to sell enough to pay the cost of this we make the following wholesale offer.

Assorted varieties. Mixed, blooming sizes. There will be many colors included in this mixture. Price per doz. 60c, postpaid. Per 100, \$2.50, not prepaid. Per 1000, \$22.50 or 10,000 for \$200.00. The 100 to 10,000 lots will be shipped by express or freight at your expense. A recent wholesale quotation seen in a trade paper was \$60.00 per 1000, so this is certainly a bargain. Growers, large or small, will find a good market for the cut flowers. Get neighbors and friends to join you and buy in quantity.

Freesias

Freesias are exquisite in beauty but their delicious fragrance is an appeal even stronger. Where they can be grown in the garden they are indispensable. They are easy forcers in pots and equally valuable for the window garden.

Culture. They are hardy only in the warmer sections of the south where temperatures do not go below about 26°. Plant outdoors early before Nov. if possible. They usually do well if planted in Nov. (we have planted in Dec. even) but the flower stems will be shorter, the flowers smaller. Plant our large bulbs 2" or 3" apart and 3" deep in the garden. Full sun exposure.

In pots they should also be planted early tho the shorter stems resulting from Nov. planting are not so objectionable. Use the regular potting soil, sandy loam and leaf mould or well rotted dairy manure. Be sure to give them a sunny window and a cool room if flowers are wanted. Warm rooms over 70° will produce long spindly foliage, but seldom flowers. Small bulbs will flower in the garden but for forcing in pots they should be $\frac{1}{2}$ " in diameter or more. Comparison of results obtained from different sizes will show that the larger sizes up to 1" diam. bloom a little earlier, have larger flowers, more flowers on a stem and longer stems than smaller sizes. The larger sizes are more expensive but one gets as large a floral display from \$1.00 worth of large

bulbs as from \$1.00 worth of the much cheaper small bulbs. The large bulbs are also more easy to grow or to force in pots.

It is therefore no economy to buy small cheap bulbs. This preamble is to introduce the statement that this year we have been able to obtain $\frac{7}{8}$ " to 1" Freesias. We try to get them every year but seldom succeed. Our grower assures us this year that he has them for us. Since the best we could do last year was much smaller bulbs, $\frac{5}{8}$ " - $\frac{3}{4}$ ", this year's price will be more per bulb but no more per unit quantity of flowers. Plant about 3 bulbs in a 5" or 6" pot, 1" deep.

The Tecolote Hybrids listed are a new giant race. The size of the flowers and the stem length equals many Baby Glads. They flower much earlier and are deliciously fragrant. If you plant them instead of Baby Glads you will be pleased.

Marie (Tecolote). Gorgeous, pure white Freesia. Deliciously fragrant. A giant in size. Bulbs $\frac{7}{8}$ " - 1" diam. 30c ea. \$3.00 per doz.

Talisman (Tecolote). Bright orange pink with cream throat. Like color of a Talisman rose. $\frac{7}{8}$ " - 1". 20c ea. \$2.00 per doz.

Tecolote Red. $\frac{7}{8}$ " - 1". 20c ea. \$2.00 per doz.

Tecolote Blue. $\frac{7}{8}$ " - 1". 20c ea. \$2.00 per doz.

Golden Daffodil. $\frac{3}{4}$ " - $\frac{7}{8}$ ". This is the most easily forced Freesia. Blooms early, exceptionally fragrant and deep golden daffodil yellow. 15c ea. 2 for 25c. Per doz. \$1.25. One can buy $\frac{3}{8}$ " bulbs, 100 bulbs for little more than this price per doz. for the giant bulbs we offer. But 12 bulbs of Golden Daffodil, $\frac{3}{4}$ " - $\frac{7}{8}$ " will give a greater floral display, more beauty and fragrance, than 100 of the $\frac{3}{8}$ " size.

Sparaxis

Sparaxis are closely related to Freesias, but are far more colorful. The colors range thru vivid tones of bright red, crimson, carmine, pink, apricot and sometimes an almost white one. A few reds are almost maroon. There is usually a contrasting color in throat. They are a little taller than Freesias and the flowers are larger, more flat and wide open. For pots, or winter flowers, few plants will create as much bright color as Sparaxis.

Culture like Freesias. They are hardier. Must have full sun exposure and in pots they need a cool room 60° - 70° day time, cooler at night. Plant 6 bulbs in a 5" pot.

Houdyshel Hybrid Sparaxis. We have grown and selected seedlings from the original Dutch varieties and now have a much more colorful strain. The colors mentioned above are descriptive of this strain and we can add that occasionally one finds colors approaching yellow, or blue. 10c ea. 6 bulbs for 40c. 75c doz.

Small bulbs bloom well in the garden and even in pots they usually flower. Price 35c doz.

Tritonias

Tritonias are also close to Freesias but taller. **Culture** like Freesias and Sparaxis.

Tritonia lineata. This interesting species grows 18" tall. The flowers are white, crossed by grey lines, hence "lineata." 3 for 15c. 50c doz. We were fortunate in being able to dig a good crop of these and offer these **Wholesale** for \$3.50 per 100, postpaid.

Ixia

Ixias are 2 to 3 ft. tall. They have slender, wiry stems and are nice for cutting. The flowers close at night and on dark days but the long closed buds look like pink striped, oblong pieces of bright colored candy and sometimes I think they are prettier than the open flowers.

Culture. They are rather tender, winter growing bulbs for the south. If bulbs are bought in the fall and stored cool in the north one can plant as far up as So. Kan. or Missouri about Mar. 1, possibly a little later. They are hardy at Washington, D. C.

Plant in full sun exposure. In every way the culture is similar to Freesias, Sparaxis and Babianas. In pots they are easy but should have a cool room and a sunny window. An unheated room where temperatures do not go below 30° at night and up to 50° or 60° during the day would be about right for this group of bulbs.

Ixias. Assorted Colors. Very showy in buds; shades to deep pink. 15c ea. \$1.00 doz.

Babianas

Blue flowers for the winter window garden are hard to find. Babianas are the answer. They are a vivid, intense blue to blue violet. Culture exactly like Freesias, Tritonias, Sparaxis and Ixias in pots or garden except they should be planted about twice as many in a pot or given space. Though the bulbs are very small, they like to be planted about 3" deep in the garden and 2" in the pot.

Babiana hybrids. These are larger, stronger than the species. Most of them are vivid violet blue. Now and then one approaches purple. 6 for 40c. 75c doz.

Marica gracilis. Walking Iris or Apostle Plant. The fugitive 2" flowers, white and blue with yellow and brown markings in center, are lovely. The flowers are followed by a small plant at end of leaf-like scape. These become heavy and bend over to ground and take root, thus walking away from mother plant. Culture: give nearly full shade, plenty water, never drying out. Tender tropical but grown in pots in north. 50c ea.

Dientes. This genus only recently has been removed from Moraea and given a new generic name. Dientes differ from Moraea in having a rhizome, similar to the Bearded Iris, and sword-like leaves. Flowers are very much like those of Moraea, borne on long wiry stems thruout summer into winter. Culture like Iris. Dientes are evergreen and they cannot be dried off. Plant at once and keep them wet or they will not start. The flower stems are perennial and should not be cut off as they flower year after year. They are not hardy where temperatures go below about 15°.

Dientes catanulata. Low growing species with waxy white flowers on a tall stem. 50c ea.

D. iridioides. White with yellow and blue markings. 35c ea.

D. iridioides Johnsonii. Flowers are about twice the diameter of the type variety above. Plant more robust. True variety. 50c.

D. Oakhurst Hybrids. New hybrids that soon make large clumps that are very ornamental in the garden. Flowers freely in summer with a few most of the time in winter. 2" flowers on 4' stems. 75c ea.

HOW YOU CAN HELP US

.... to ship your orders more promptly. Like everyone else, we are short of labor. But we have plenty of bulbs of nearly all items and we think enough labor to dig and ship them. We may not be quite as prompt as usual but we will get the bulbs to you within the correct planting season.

Help us by not requiring us to write letters. Read first, "Terms and Instructions for Ordering," and comply. Order only bulbs as listed in this catalog, and only as specified in description. Use an itemized form for bulbs ordered. Be patient, if necessary. Do not inquire for bulbs not listed.

LILY FAMILY—Liliaceae

The type species is *Lilium*, or true Lily. Many call Crinums, Callas, Cannas or any bulbs "Lilies," but this is an error.

Lilium. This genus includes all true Lilies. Culture. It is better to plant all true Lilies in the fall altho one can plant the stem rooting sorts in the spring but with results not quite as satisfactory. They should be planted 4" to 6" deep in a good sandy

loam. If underdrainage is not perfect, place a handful of coarse sand under each bulb and another around them. The soil should be mildly acid. There is only one species that will endure alkali and we do not list it. A great deal of humus, as leaf mould or peat, should be mixed with soil. Lilies must have their feet cool and their head warm. Therefore planted among low shrubs or plants where tops are in the sun is ideal. They do very well in the half shade of trees or a lath house.

Lilium Maxwill. Cross between Willmottiae and Maximowiczii. It has the lovely flowers of Willmottiae, orange yellow with recurving petals and black dots scattered over them. The Maximowiczii bequeathed tall stems, many flowers and hardy thrifty growth. It is a sturdy lily that will do extremely well with ordinary garden culture. Sizes at 50c, 75c and \$1.00 ea.

L. pardalinum. California native and very easy to grow. Many deep orange flowers, shading to red at tips. Prefers partial shade, moist but well drained soil. Plant 4" or 5" deep. Blooms June, July. Hardy. 25c ea. Largest bulbs 35c. \$2.50 and \$3.50 per doz.

L. pardalinum giganteum. **Sunset Lily.** A hybrid of pardalinum and a glorified replica of it. Bright red with brown dots. Large bulbs 45c ea. \$4.50 per doz.

L. regale. White with cream throat and tinted pink on back of petals. A favorite, easily grown garden lily. Sizes at 20c, 30c and 35c ea. The larger bulbs give more flowers in greater proportion to cost.

L. regale, improved. Larger and whiter flowers. We have only a few bulbs at 75c ea. Seeds are easy to grow. Bloom in 2 years. Plant in garden, slightly shaded, 1" deep, constant moisture but not soggy. Per packet, 50c.

L. Shuksan. **New hybrid.** Yellow background with maroon spots. A very striking and beautiful lily, 3 to 5 ft. high. Plant 8" deep and give good culture, reasonably abundant moisture. \$1.25 ea., no quantity discount.

Roman Hyacinths are scarcer than Dutch Hyacinths now. Plant 3" or 4" deep in garden. Full sun or slight shade. Easy in pots but Dutch Hyacinths are preferred. Assorted colors, 25c ea. Pink, 30c ea.

Dutch Hyacinths

It has been years since we could list Dutch Hyacinths. Early last spring a gaunt, emaciated man, Nic Vander Bruggen, recently arrived from Holland, called on me with an eloquent talk about the Dutch Hyacinths. He was a Dutch salesman of course. Being curious, I commented on his thinness in contrast to his fat brother, a Montebello florist whom I know well. He explained, "For a long time in Holland, we had only Tulip bulbs and Spinach to eat. I lost weight, down to 95 lbs. I now weigh 125 lbs." When I saw him last, several months later, he weighed 160 lbs. It seems that the Dutch ate their more common and cheaper sorts of Tulips. They are nourishing and have a pleasing taste. Therefore Tulips are still rather high priced. But Hyacinths are inedible. They could not eat them and they are therefore very moderately priced.

These Dutch supersalesmen are linguists, well educated and eloquent. After placing my order for a few thousand I requested him to write out his own talk to me and to describe his own culture methods. He mailed this back to me from Holland. I wish I had space available to print all of it for your enjoyment. But I can only give a brief resumé.

Said Mr. Vander Bruggen: "Mr. Houdyshel, I have selected for you six varieties showing the entire range of colors and in the most satisfying varieties."

Hyacinths for centuries have been the favorites of flower lovers everywhere. Their exquisite beauty, rare fragrance and easy, simple culture explain this fact. They bring happiness and beauty to the castle and to the humblest cottage. They are loved by queens as well as by chamber-maids.

Culture. Hyacinths are winter hardy but in cold climates, a good mulch of leaves or straw is advisable. Plant 3" or 4" deep with conditions similar to Roman Hyacinths.

Growing in glasses. Use regular Hyacinth glasses. Keep the water almost but not quite touching the base of bulb. Set them in a cool, dark place until well rooted and the flower buds showing up well. Then bring to a moderate temperature and shaded light until buds are dark green. Not before they reach this stage are they ready to be brought to full daylight. Then place in a warm room but not close to a stove.

In bowls the treatment is exactly the same, except that the bulb is held in position by clean gravel. The water must be controlled every two days, kept at the same level but never touch the bulb.

Pots. If new pots are used, soak them two days in clean water to remove chemical impurities. Old pots should be well washed or even boiled. You can use a 4" pot for one bulb. Use a clean light sandy soil, but no humus or manure or other fertilizer. A Hyacinth grows on its own reserves. Place gravel in bottom for drainage. Set bulb just under soil surface, with top just visible. The soil should be kept just moist, but never wet. They may now be placed in a cool, dark place or they may be plunged into the soil outside in a cool shady place, as I recommended for Daffodils. Cover tops of pots by 2" of soil and then a layer of straw or leaves. Control moisture so that they are always moist but never wet. The drainage around pots must be good. In about 6 weeks or more, after they are well rooted (be sure they are) they may be brought into a cool dark room and handled the same as that recommended for glasses and bowls.

If these instructions are carefully followed you will be rewarded by watching them develop into fragrant, graceful gay flowers, a miniature replica of springtime in Holland.

The following is Mr. Vander Bruggen's own selections of varieties. Bulbs will be delivered as soon as they arrive from Holland. Pot or plant about Sept., Oct., or Nov. if possible but later plantings succeed. These are not the small bedding size bulbs but a good forcing size, 16/17 cm.

L'Innocence, most popular pure white of elegant form.

Jan Bos. Tall spike of carmine red flowers, one of the best of recent introductions.

Marconi. Bright deep rose, flushed white. Large compact spikes.

Pink Pearl. Splendid spike of fine pink bells.

Bismarck. Fine spike of large light blue flowers.

Catara. A new Hyacinth that compels attention. Beautiful indigo blue bells on a strong spike.

Prices. Exhibition size, best varieties in each color. 40c each. Collection of one bulb of each six varieties in the entire color range of Hyacinths, \$2.25. Six bulbs of any one variety, \$2.00.

Muscaria. Grape Hyacinths, var. Heavenly Blue. Racemes of closely placed, exquisite, tiny blue bells. Fine in pots or garden. L. 10c ea. 60c doz. Blooming size 35c doz.

Scillas are closely related to Hyacinths. All are useful in the garden or in pots. All are hardy in the north except *S. peruviana*.

Scilla hispanica (campanulata). The Spanish Jacinth. Resemble Roman Hyacinths. Profuse bloomers in half shade and any good garden soil. Plant 2" or 3" deep in rows 12" apart.

S. hispanica alba. Large white flowers. 5c ea. 50c doz.

S. hispanica alba maxima. Only a little larger. 8c ea. 75c doz.

S. hispanica rosea. Rose pink. 8c ea. 80c doz.

S. hispanica, Sky Blue. Very tall, large light blue. 8c ea. 80c doz.

S. hispanica, Blue. The common dark blue. 7c ea. 70c doz.

S. hispanica, Excelsior. Giant, dark blue. The finest of all. 25c ea. \$2.50 per doz.

Scilla hispanica Special Offer. Assorted named varieties to which we shall add some seedlings that are as good but may be any color. We have more than we wish to plant back and will give you lower than wholesale prices. Per doz. 40c. Per 100, \$2.75. Per 1000, \$20.00.

Planting stock, small bulbs many of which should flower if planted early and given

good culture. They make large bulbs in one year. Per 100, \$1.50. 500 for \$5.00. 1000 for \$9.00.

S. hyacinthoides. Fine for the outside garden and perfectly winter hardy in north. It has a densely flowered raceme often 3 ft. or more in height. Plant in full sun. Flowers are very useful for cutting. Top size, 25c. M. 15c. \$2.35 and \$1.50 per doz.

S. peruviana. Another blue flowering bulb for your winter window garden, easy to grow, sure to flower and makes a large display. The flower scape is short as it should be for a pot but flowers are well above foliage. The flower scape is broad, — often 6" or more, compact and oval to conical in form. Give the bulb a pot about twice its own diameter. Set it with neck of bulb above soil, full sun exposure and in a cool room. This is the only tender *Scilla* that we list, but it is very nice in southern gardens where it survives the winters well up the coast lines and is hardy at Washington, D. C. Jumbo size for 50c ea. Medium for 35c.

S. peruviana hybrids. These are improved varieties in a great many shades of white, rose, lavender to deep blue. The colors cannot be specified as they are not marked. Price \$1.00 ea.

Ornithogalum arabicum. The showiest ornithogalum. The round glossy black ovary in the center of the white flower is a beautiful contrast. Flowers in a compact raceme at top of stem giving the appearance of an umbel. Tender. Easy in pots, blooming about Easter. L. 25c. M. 15c. Pot only large bulbs.

Lachenalias, or Cape Cowslips, furnish bright colorful flowers from before Christmas to February and later. They are small plants, usually one or two leaves. Flower scape 6" to 12" tall, with 12 to 24 tubular flowers about 1" long. For early flowers start them early in September and in no case delay beyond late October to plant. Leaves and stems are sometimes gaily spotted and decorative. **Culture.** Easy outside in mild climates and force easily in pots in the house. Give them a cool room. Plant in full sun, 2" deep and 2" apart. Several can be planted in a pot at about 2" apart. They may be grown outside or in flats and potted when in full bloom. When tops die, dig bulbs and store dry. They rot easily in the ground if moisture is received when dormant.

Lachenalia Ada Bryson. Flowers orange yellow. Buds and tips of spikes reddish. Leaves spotted red. Blooms late Dec. Very bright, cheerful coloration. 20c ea. 3 for 55c. 6 for \$1.00.

L. aurea. Beautiful, large golden yellow, pendulous flowers, tubular in shape. A bright and cheerful pot plant for Christmas. 25c ea. 3 for a 4" pot, 65c.

L. pendula superba. Brilliant coral red, tipped green and purple. A red Christmas flower in pots or the garden in deep south. 25c ea. 3 for 65c.

L. tricolor. Its vivid coloration makes it very attractive. One of the easiest to grow. 30c ea. 3 for 80c.

Veltheimia viridifolia. Neither a picture nor words can accurately portray the beauty of this plant. For foliage alone it is superb. The vivid glossy green leaves are wavy margined and form a nice rosette. In pots, or in the garden in So. Calif. and other mild climates, it is in bloom by Dec. 15 and continues for about three months as large bulbs send up two or more spikes. The tubular, drooping flowers are densely placed on a long raceme. The color is a deep rosy or purplish pink of ineffable tones not found in any other flowers.

Culture is very easy. It prefers a sandy soil to which peat or leaf mould has been added. In pots the drainage should be perfect. They must be ordered early as nothing holds them back. Best to order before Sept. 15 or Oct. 1.

Specially priced. 50c ea. \$6.00 per doz. Extra large bulbs—75c, \$1.00 and \$1.50 ea.

Tulips

It is still a temptation to sell none of our Tulips as we can leave them in the

ground thus avoiding the cost of digging, and sell the cut flowers for about as much and possibly more than we get for the bulbs. On consideration, however, we consider it better to please our bulb customers and dig part of them,—leave part in the ground.

Tulip culture. Plant Tulips, Sept. to Nov., 4" to 6" deep in rich sandy loam or if soil is heavy add a very large quantity of some form of fine decayed humus, such as screened leaf mould. Manure is good if 1 year old and thoroly rotted and screened. Fresh manure, added recently, is deadly to any bulbs.

In arid climates like ours, the ground should be moist when bulbs are planted; give them 2 to 4 weeks time to start roots before watering again. No bulb should have too much moisture before it has made roots as in that condition they easily fall victim to rot or other infections. About Nov. 1 is a good time to water Tulips more liberally. We use overhead sprinkling and give Tulips a good soaking every week or 10 days thruout Nov., and until they die down in the spring. The usual cause of failure here is not enough water. Tulips like Oregon rains and we must imitate Oregon climate to succeed.

Assorted Colors of Darwin, Cottage and Breeder Tulips. Sizes from a little under 1" (a good flowering size) to about 1½". Per doz., \$1.00. 1½" diam. up, \$1.50 doz.

Planting stock. Small bulbs ranging from about ⅓" to nearly ⅔" diam. Some of them will give small flowers the first year with correct culture. Per doz. 35c. Per 100, \$2.00. As these will make a good blooming size in one year, this is a good way to get Tulips in quantity and economically.

OXALIS FAMILY—Oxalidaceae

There are two types, the winter and the summer growing. The summer growing species are listed in our spring catalogs. The following are all winter growers. These are the brightest and most vivid of winter flowers for a sunny window or in the garden in the south. They give a profusion of bloom over several months period. A bed looks like a carpet of solid pink, rose, white, yellow, etc. The flowers are large, some over 1" diam.

Culture. Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little deeper. In pots, the smaller may go 6 in a 4" pot. Use good rich soil, altho they will grow in any soil. Give full sun exposure as they open only in full sun and close at night. Order and plant early as they begin to sprout even in August. But they may be shipped even with long sprouts up to mid-October.

Oxalis Bowiei. A large plant with bright rose red flowers. 3 bulbs to a 5" pot. 5c ea. 50c doz. \$3.75 per 100. Largest size 10c ea.

O. cernua. Bermuda Buttercup. Deep golden yellow flowers. Very profuse. 3 for 10c. 35c doz. \$2.50 per 100. Largest size, 10c ea.

O. Grand Duchess. Low growing plants, but give a profusion of very large flowers in three colors. The **Pink**, **Lavender** and **White**, 5c ea. 45c doz. \$3.00 per 100. Jumbo sizes 10c ea.

O. Hirta. One of the finest winter Oxalis, and most unusual as it makes a leafy stem that to some extent falls over and will trail down the sides of a pot. Nice for hanging baskets. The flowers are deep rosy red. L. 15c ea. \$1.25 per doz., \$9.00 per 100. M. 10c ea. 85c doz., \$5.00 per 100.

Oxalis Special. The bulbs offered in this lot are assorted in size and color. They will all flower well. Some are accidentally mixed, others are surplus. Price 30 for \$1.00.

THE ORCHID FAMILY—Orchidaceae

The word **Orchid** is the synonym of floral beauty. But the growing of most Orchids is an expensive luxury. The Cattleyas cannot be grown even in an ordinary greenhouse

but require a special house, correct in temperature and humidity. Only an experienced specialist can grow them. The following orchids are not too difficult in pots in the north or in the outside garden in the south where minimum temperatures do not go much below 27°. Even at that temperature, if long continued, they should be covered. Where temperatures descend to an occasion low of 20°-24° one must be prepared with boxes, cartons, etc., and do a thoro job of covering.

Epidendron O'brienianum. The tall stems grow to a height of 3 ft. or more, are slender and require the support of adjoining plants or stakes. As the plant grows it produces terminal clusters of flowers thruout all the year when warm. This large cluster is composed of many small brilliant red flowers of a typical orchid form. Below each cluster as it withers, a lateral bud develops and continues the upward growth. At its base aerial roots develop. Propagation is effected by planting these air-rooted branches.

Culture. Epidendrons need a warm, almost full sun exposure and constant but not excessive moisture. They will grow in well drained sandy loam soil containing some gravel but it is better to incorporate 50% leaf mould or 35% or more peat for a distance of a foot around and under the plant.

Price of E. O'brienianum: cutting with aerial roots, 75c.

Cymbidiums are immensely popular in So. California. Many are grown in greenhouses in England.

The large 4" to 6" flowers are borne on a stem often 4 ft. long, and from 12 to over 30 in number. Well established plants may give 4 or more and large clumps up to 35 stems. The flower spikes remain in perfect condition for 8 to 12 weeks. The cut flowers have unsurpassed lasting qualities and may be used many times in a corsage if kept in a refrigerator between times. Florists retail the flowers for only a little less than Cattleyas.

The flowers are of typical orchid form and in a wide range of colors. It is impossible to give accurate color descriptions of hybrid Cymbidiums as the hybrid is named from the cross and may include several seedlings not necessarily identical, tho close. Descriptions are usually only approximate but not always even that.

Culture. Cymbidiums are terrestrial orchids from India and Burma where they grow in the moist atmosphere of mountains and foothills in perfectly drained situations. The culture is easy enough if you note carefully our instructions. But you can't plant them and forget them. The shade of a lath house, lath spaced 1" apart, 50% shade, is about right. They do well in this exposure in our hot inland valleys and in cooler coastal regions the lath may be farther apart. The shade of trees giving filtered light and full sun in early morning or evening suits them well. They do well in a sandy or gravelly loam of acid reaction. In preparing our soil we dig to a depth of 10" and the same distance on each side of plant. We fill this hole with peat or peat and leaf mould. This is thoroly mixed with the soil thrown out, wet a little and pressed down. The elevation resulting may be rounded over on sides.

The base of the plant is enlarged into a pseudo-bulb, surmounted by the foliage. This bulb must not be covered by soil. Insert it to a depth of only about $\frac{1}{3}$ of its length. The plant may need support until roots form.

Set the plants in moist soil and water after planting to settle soil around them. At first, they must only be kept moist until roots have developed. If moisture is excessive the pseudo-bulb will rot and the plant is lost. In warm weather, when plant is in full growth they will use more moisture. We sprinkle them a little every day or two. They make scant growth if allowed to become dry between waterings. But at no time should they be kept in a soggy condition. Provision must be made for perfect drainage in pots or garden.

Customers are sometimes alarmed if the roots of plants appear dead when received or if roots have been removed. When Cymbidiums are moved, the roots usually die

back to the pseudo-bulb. Roots usually start in about 6 weeks if you treat plants as advised.

Sometimes when moved, the inexperienced grower neglects his plant a little and the foliage dies. This is not fatal. The pseudo-bulb has only become a back bulb. The foliage will never be replaced but a new plant will start at base of bulb in from 2 to 6 mo. if you keep it moist.

In Pots, they are reasonably easy. They can be grown in the same compost as required by Begonias or in soil as we described for outdoor culture. Give them a warm situation, not as cool as most plants require in the summer, a little cooler in the winter when resting. We suggest an 8" or 10" pot. They can be set in an 8" pot and shifted when necessary. They begin blooming in late winter and continue to late spring.

The plants we offer consist of a single pseudo-bulb and foliage. They should flower in two years with correct culture. We have had less than 1% flower in a year or less, tho it can happen. Even large plants when moved without soil require a year.

We send out only good plants. We have been held responsible for plants that died from no water at all and from too much. We cannot longer accept responsibility for wrong handling.

Cymbidium plants cost more than Cattleyas. The flowers sell for less but Cymbidiums produce several times as many flowers and cost much less to produce. They are less expensive to grow. I had one 2-bulb plant last year that produced two flower spikes of 15 or more on each. We sold the flowers for \$1.00 each, wholesale. That was 10% income on a value of \$300, or \$150 per pseudo-bulb. But this result was unusually good. But our entire flower sales were so good that I am almost reluctant to sell plants. We list them chiefly as a "good will" offer to our customers and if we sell none we will be quite as happy as if we sell 250 as none can be bought from wholesale growers.

We ship Cymbidiums by prepaid parcel post but we do not accept responsibility for freezing in transit to the north. To avoid that risk, ask that delivery be made at a time when there is no danger or that the plants be packed with extra insulation and shipped by express, charges collect.

Butterfly. Yellow to buff with red lip. \$15.00.

Doreen. Greenish orange, yellow lip, spotted purple. \$15.00.

Giganteum. A robust, large plant. Flowers are smaller than some but as they are first to flower they have no competition. \$12.50.

Insigne. White, flushed pink to deep rose pink. Very small plant, thus well adapted for growing in pots. Small plants, \$15.00.

Moira. Shades of cream and yellow with crimson and purple markings on lip. \$15.00.

Veitchii. This species grows vigorously and multiplies rapidly. It has very pretty, large flowers with the fault of having few flowers on the stem. That is less objectionable than some growers claim as the flowers are very pretty, sell well and plants produce many more spikes than any other sort. \$14.00 ea.

Winter Cheer. Cream with pink dots and veins. Red dot on lip. \$15.00.

No quantity discounts on Cymbidiums. The doz. rate is 12 times the cost of one.

THE CALLA LILY FAMILY—*Araceae*

This family contains the so-called Calla Lilies or *Zantedeschia*, Black Callas and other Aroids.

Culture. All *Zantedeschias* and *Arum palaestinum* are suitable for pot culture. *A. palaestinum* will start about September or later. Do not put this bulb into moist soil before that or it will rot. *Zantedeschias*—pink, yellow and spotted leaf—may be potted by about Dec. 15. Don't rush them, as too much water before they start to grow

may rot them. They may be held back and started in early spring, here in late February. All do well in the garden in a moist semi-shaded cool place. They are not hardy in cold climates; dig in fall. The White Calla usually blooms in California in the garden in late winter. They may be planted in early fall in pots or garden. All do best in mildly acid soils, on sandy side.

It is an error to keep large White Callas growing continuously. If rested thru summer you will be rewarded with flowers. A rest brings flowers when they start again, often twice or more in a year. The Baby Calla should not be allowed to lose its foliage. Callas as pot plants need some sun, enough to prevent spindly growth, plenty of light and like all plants, good ventilation. They need abundant water but good drainage.

Zantedeschia aethiopica, var. Baby Calla. This is the smallest and whitest Calla. Small enough for corsage. We send small bulbs as the large bulbs make larger flowers, approaching in size those of Godfrey. For tiny 1" flowers replant your small bulbs. 20c ea. 3 for 50c. \$1.50 per doz.

Z. aethiopica, var. Godfrey Calla. This is the medium sized White Calla Lily. Grows to a height of 2 or 3 ft. It is much more suitable for growing in pots than the large type and the flowers are sufficiently large. They also bloom more freely. These are easy in pots, 8" in diam. They should be potted or planted in the garden as early as possible for winter bloom, tho they can usually be held back until mid-winter. Plant with bulbs covered by an inch or so of soil, in a good rich sandy soil with humus added. Blooming sizes at 20c and 35c. Largest bulbs for 50c ea.

Z. aethiopica, large type. We grow few of these because we consider them too large for pots. But they will do well if you have the space and the large pot. Small bulbs may be started in 8" or 10" pots but you may have to shift to a larger one. Our largest bulbs will surely fill a good size bucket or tub in one or two seasons but you can start them off in a 12" pot. Smaller bulbs, 50c ea. M. 75c. Jumbo bulbs, \$1.00.

Z. albo-maculata. Spotted-leaf calla. The prettiest foliage of all and worth growing for that alone. Endures sun best. Flowers, creamy white with dark throat. 25c and 40c ea.

Z. elliotiana. Pure golden yellow flowers. Requires more shade than others, but give potted bulbs part sun. 20c ea. 6 for \$1.00. Larger bulbs 25c, 35c and 50c ea.

Z. melanoleuca. Purple Throated Calla. Light yellow flowers with purple throat. Spotted foliage similar to the Yellow and Spotted-leaf Callas. Blooming size, 75c. Large sizes at \$1.00 and \$1.25.

Z. rehmanni, var. elegans. This variety has light pink flowers of a lovely shade that many like better than the darker colored type var. It is taller, larger and a better grower. More easy also to force in pots, but when forced many report they produce white flowers. Even in the garden some flowers are white with shell pink tintings. But the white ones are still lovely, more so than the white Aethiopica. Large bulbs, 75c ea.

Arum palaestinum. Black Calla or Solomon's Lily. Foliage and flower like callas. Really black. Plant 4" deep and not before September 1. If not kept perfectly dry until that time the bulbs rot. Flowers in February in pots or in the garden in the south. No bad odor. Best in half shade. Sizes 50c, 75c and \$1.00.

A. italicum. Has attractive green leaves. The flower spathe is long, inflated, ivory white. No "perfume." 50c to 75c ea.

A. maculatum. Like A. italicum, except leaves have lighter veining and larger bulbs. 50c, \$1.00 and \$1.50 ea.

Dracunculus vulgaris. Rich tropical foliage and huge black purple flowers. Carrion odor. Hardy if planted deeper than frost penetration. Jumbo bulbs, \$1.00 to \$1.50 ea.

See Spring Catalog for other Aroids.

RANUNCULUS AND ANEMONES—Ranunculaceae

Ranunculus range in color from red, pink, yellow to white. This strain if well grown produce giant double flowers on tall stems.

Anemones are red, pink, white and blue but blue predominate. The flowers of this strain are mostly single which we prefer in Anemones.

Culture. Best planting time is Sept. to Feb. Bulbs start better in a medium temperature. In hot weather, start them in a flat in the cool shade of a tree. In cold weather start them in a moderately warm room. When not over 1" high transfer to garden. For pots, place pots when starting the bulbs as directed for the flats. The best soil is rich sandy loam. To heavier soils add much leaf mould. Do not water much when sprouting as the best bulbs will rot if too wet.

We offer only the largest size. They cost much more per bulb but each bulb gives so many flowers that your flowers cost no more and are earlier, larger, better and more sure.

Giant Double Ranunculus. Jumbo size bulbs,—about 1" diam. 20c ea. \$2.00 per doz. \$7.50 per 50 bulbs. \$14.00 per 100.

Anemones. Largest size bulbs, same price as Ranunculus.

BILLBERGIAS—Bromeliaceae

Billbergias have a rich, tropical appearance with the showiest inflorescence. In both foliage and flowers they are most unusual and most lovely. The numerous vividly colored red bracts on drooping racemes topped by flowers that are usually a shade of blue comprise the floral display. The stiff erect foliage forms a cup and is ornamental and often colorful.

Culture. They are tender tropicals but do well in mild climates like that of So. Calif., in the garden. They are easy in pots. They need half shade. Too much shade prevents the coloring of those varieties that have variegated foliage. The cups should hold a drink while growing,—in the summer. Do not overwater when starting them or in the winter as Billbergias make rapid growth only in hot weather. Being Epiphytes, their natural soil is pure leaf mould or rotted wood mould. Peat and sphagnum are good substitutes. Add a little sand for greater substance. They do well in half sand and half leaf mould or peat. Neither overwater or let them become dry.

Billbergia calophylla. Transverse bars of grey on the large green leaves. Blood red bracts and dark blue flowers. Free blooming in hot weather. \$2.50 ea.

B. distachia hybrid. Foliage reddish green with cream spots. Long spikes with rose pink bracts and blue margined green flowers. Blooms in early spring and a few in late summer. \$1.00.

B. nutans. The earliest to flower, often late Dec., usually in Jan. - Feb. The inflorescence is most beautiful. Price 50c ea.

B. rubro-cyanea. The foliage has very rich variable markings of green, red and white. Flowers green, edged dark blue with crimson bracts. To bring out the rich colors of the foliage give some sun exposure. The more sun received, the finer will the colors be. But guard against too much sun which would burn and injure foliage and stop growth. \$1.25 ea.

B. thrysiflora. Gracefully recurved bright green leaves. Startling inflorescence of scarlet bracts and purplish flowers. \$2.50.

Gloxinias

Tuberous Begonias, Fancy Leaf Caladiums, Gloriosas, Ismenes, etc., will be listed in our Spring Catalog. More varieties than ever before. None of these can be planted before Feb.